The World as Active Power

Brill's Studies in Intellectual History

General Editor

A.J. Vanderjagt, University of Groningen

Editorial Board

C.S. Celenza, Johns Hopkins University, Baltimore
M. Colish, Oberlin College
J.I. Israel, Institute for Advanced Study, Princeton
W. Otten, University of Chicago

VOLUME 180

The World as Active Power

Studies in the History of European Reason

Edited by

Juhani Pietarinen and Valtteri Viljanen

BRILL

LEIDEN • BOSTON
2009

On the cover: Illustration by Hanna Meretoja.

This book is printed on acid-free paper.

Library of Congress Cataloging-in-Publication Data

The world as active power : studies in the history of European reason / edited by Juhani Pietarinen and Valtteri Viljanen.
p. cm. — (Brill's studies in intellectual history, ISSN 0920-8607 ; v. 180)
Includes bibliographical references and index.
ISBN 978-90-04-17712-3 (hardback : alk. paper) 1. Power (Philosophy) 2. Philosophy—History. I. Pietarinen, Juhani. II. Viljanen, Valtteri.
BD438.W67 2009
190—dc22

2009027839

ISSN 0920-8607
ISBN 978 90 04 17712 3

Copyright 2009 by Koninklijke Brill NV, Leiden, The Netherlands.
Koninklijke Brill NV incorporates the imprints Brill, Hotei Publishing, IDC Publishers, Martinus Nijhoff Publishers and VSP.

All rights reserved. No part of this publication may be reproduced, translated, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior written permission from the publisher.

Authorization to photocopy items for internal or personal use is granted by Koninklijke Brill NV provided that the appropriate fees are paid directly to The Copyright Clearance Center, 222 Rosewood Drive, Suite 910, Danvers, MA 01923, USA.
Fees are subject to change.

PRINTED IN THE NETHERLANDS

CONTENTS

List of Contributors vii
List of Abbreviations ix
Classic Works not included in the Bibliography or List of Abbreviations xi

Introduction 1
Juhani Pietarinen and Valtteri Viljanen

Chapter One Plato's Dualism: The Cosmos as Active and Passive Power 11
Juhani Pietarinen

Chapter Two The Active Principle in Stoic Philosophy 49
Håvard Løkke

Chapter Three Plotinus on Act and Power 71
Eyjólfur Kjalar Emilsson

Chapter Four Power and Activity in Early Medieval Philosophy 89
Tomas Ekenberg

Chapter Five Power and Possibility in Thomas Aquinas 113
Andreas Schmidt

Chapter Six Causal Power in Descartes' Mind-Body Union 131
Juhani Pietarinen

Chapter Seven *De novo creat*: Descartes on Action, Interaction, and Continuous Creation 163
Timo Kajamies

Chapter Eight Motion and Reason: Hobbes' Difficulties with the Idea of Active Power 185
Juhani Pietarinen

Chapter Nine Spinoza's Actualist Model of Power 213
Valtteri Viljanen

Chapter Ten Leibniz on Force, Activity, and Passivity 229
Arto Repo and Valtteri Viljanen

Chapter Eleven Kant on Force and Activity 251
Arto Repo and Hemmo Laiho

Chapter Twelve Differences that are None. Hegel's Theory of Force in the *Phenomenology of Spirit* 283
Andreas Schmidt

Chapter Thirteen Schopenhauer's Twofold Dynamism 305
Valtteri Viljanen

Bibliography 331

Index 343

LIST OF CONTRIBUTORS

Tomas Ekenberg: Ph.D. at Uppsala University where he teaches history of philosophy and logic. From 2008 to 2012 he will work as a researcher in, and be the deputy director of, the research program *Understanding Agency*. He is the author of *Falling Freely: Anselm of Canterbury on the Will* (dissertation 2005) and of various articles on early medieval philosophy.

Eyjólfur Kjalar Emilsson: Professor of Ancient Philosophy at the University of Oslo. He is the author of *Plotinus on Sense-Perception: A Philosophical Study* (Cambridge University Press, 1988), of *Plotinus on Intellect* (Oxford University Press, 2007), and of numerous articles on ancient and Neoplatonic philosophy, the translator of Plato's *Sophist* into Norwegian, and the leader of the international projects 'Reason, virtue and action in ancient philosophy' (supported by NFR) and 'The Hellenistic Schools and their Influence on Medieval and Early Modern Thought' (supported by NOS-H).

Timo Kajamies: Ph.D., Academy of Finland Postdoctoral Fellow at the University of Turku where he has taught epistemology and history of philosophy. He is the author of *Problems from Descartes's Theory of Truth: Misrepresentation, Modality, and the Cartesian Circle* (dissertation 2001) and of various articles on Descartes and epistemology.

Hemmo Laiho: Researcher at the University of Turku. He is working on his dissertation on Kant's philosophy.

Håvard Løkke: Ph.D. at Oxford University, teaching ancient and Hellenistic philosophy at the University of Oslo. He is the author of *Early Stoic Epistemology* (dissertation 2004) and of articles on Stoic philosophy, and co-translator of Plato's *Sophist* into Norwegian.

Juhani Pietarinen: Professor Emeritus of Practical Philosophy at the University of Turku. He is the author of *Lawlikeness, Analogy, and Inductive Logic* (1972), of *Ilon filosofia. Spinozan käsitys aktiivisesta*

ihmisestä [*The Philosophy of Joy. Spinoza's Conception of Active Man*] (2001), of *Platonin filosofia* [*The Philosophy of Plato*] (2005) and of numerous articles on ethics, social philosophy, philosophy of science, and early modern philosophy, the co-editor of *Perspectives on Human Conduct* (E. J. Brill, 1988), *Genes and Morality. New Essays* (Rodopi, 1999) and *Philosophy and Biodiversity* (Cambridge University Press, 2004), and the former leader of the project 'European Reason II' supported by the Academy of Finland.

Arto Repo: Ph.D., Researcher at the University of Turku where he teaches history of philosophy and metaphysics. He is the author of *Leibniz on Substances and Material Things* (dissertation 2001) and of various articles on Spinoza and Leibniz.

Andreas Schmidt: Ph.D., Lecturer at the Eberhard Karls Universität Tübingen where he teaches classes on early modern philosophy and nineteenth-century German philosophy. He is the author of *Der Grund des Wissens. Zu Fichtes Wissenschaftslehren in den Versionen von 1794/95, 1804/II und 1812* (Schöningh Paderborn, 2004), of *Göttliche Gedanken. Zur Metaphysik der Erkenntnis bei Descartes, Malebranche, Spinoza, und Leibniz* (Vittorio Klostermann, forthcoming), and of various articles on early modern and modern philosophy. He has also translated René Descartes' *Meditationes de prima philosophia* into German.

Valtteri Viljanen: Ph.D., Academy of Finland Postdoctoral Fellow at the University of Turku. He is the author of *Spinoza's Dynamics of Being: The Concept of Power and its Role in Spinoza's Metaphysics* (dissertation 2007) and of various articles on Spinoza.

LIST OF ABBREVIATIONS

AA	Kant, Immanuel. *Gesammelte Schriften* I–XXIX. Edited by the Deutsche (formerly the Königliche Preußische) Akademie der Wissenschaften. Berlin: Walter de Gruyter, 1902.
AG	Leibniz, Gottfried Wilhelm. *Philosophical Essays*. Translated by R. Ariew and D. Garber. Indianapolis: Hackett, 1989.
AT	Descartes, René. *Œuvres de Descartes* I–XI. Edited by C. Adam and P. Tannery. Paris: Vrin, 1996.
CSM	Descartes, René. *The Philosophical Writings of Descartes* I–II. Translated by J. Cottingham, R. Stoothoff and D. Murdoch. Cambridge: Cambridge University Press, 1985.
CSMK	Descartes, René. *The Philosophical Writings of Descartes* III. Translated and edited by J. Cottingham, R. Stoothoff, D. Murdoch and A. Kenny. Cambridge: Cambridge University Press, 1991.
E	Spinoza, Benedictus de. *The Ethics*. In *The Collected Works of Spinoza* I, edited and translated by E. Curley. Princeton: Princeton University Press, 1985.
EW	Hobbes, Thomas. *The English Works of Thomas Hobbes* I–VII. Translated and edited by W. Molesworth. London: John Bohn, 1839–1845.
FT	Hobbes, Thomas. *The Elements of Law: Natural and Politic*. Edited by F. Tönnies. Cambridge: Cambridge University Press, 1928.
G	Leibniz, Gottfried Wilhelm. *Die philosophische Schriften von Gottfried Wilhelm Leibniz* I–VII. Edited by C. I. Gerhardt. Berlin: Weidmann, 1875–1890 (reprint Hildesheim: Olms, 1960).
L	Leibniz, Gottfried Wilhelm. *Philosophical Papers and Letters. A Selection*. Translated and edited by L. E. Loemker. Second Edition. Dordrecht: Kluwer, 1989.
LS	Long, A. A. and David N. Sedley. *The Hellenistic Philosophers* I–II. Cambridge: Cambridge University Press, 1987.

M Hegel, Georg Wilhelm Friedrich. *Hegel's Phenomenology of Spirit*. Translated by A. V. Miller. Oxford: Clarendon Press, 1977.

MP Hobbes, Thomas. *Leviathan*. Edited by C. B. Macpherson. Harmonsworth: Penguin Books, 1968.

S Anselm of Canterbury. *Opera omnia* I. Edited by F. S. Schmitt. Edinburgh: Nelson, 1946.

W Schopenhauer, Arthur. *The World as Will and Representation* I–II. Translated by E. F. J. Payne. New York: Dover Publications, 1966.

WF Leibniz, Gottfried Wilhelm. *Philosophical Texts*. Translated and edited by R. S. Woolhouse and R. Francks. Oxford: Oxford University Press, 1998.

CLASSIC WORKS NOT INCLUDED IN THE BIBLIOGRAPHY OR LIST OF ABBREVIATIONS

PLATO

Platonis Opera I–V. Edited by J. Burnet. Oxford: Clarendon Press, 1900–1907.

Complete Works. Edited by J. M. Cooper (associate editor D. S. Hutchinson). Indianapolis: Hackett, 1997.

The Perseus Digital Library. Editor-in-chief G. Crane. Tufts University. Plato's dialogues in Greek and in English with commentaries. http://www.perseus.tufts.edu/cache/perscoll_Greco-Roman.html.

ARISTOTLE

Aristotelis Opera I–V. Edited by I. Bekker. Berlin: G. Reimer, 1831–1870.

The Complete Works of Aristotle I–II. The revised Oxford translation. Edited by J. Barnes. Princeton: Princeton University Press, 1984.

PLOTINUS

The Enneads I–VII. Translated by A. H. Armstrong, including the Greek (*Loeb Classical Library*). London: Heineman, 1966–1968.

The Essential Plotinus: *Representative Treatises from* the Enneads. Translated by E. O'Brien. Indianapolis: Hackett, 1964.

THOMAS AQUINAS

Opera Omnia I–L. Iussu Leonis XIII P. M. edita (the Leonine edition). Romae, 1882–1992.

Selected Philosophical Writings. Translated by T. McDermott. Oxford: Oxford University Press, 1998.

Opera Omnia (online version): http://www.corpusthomisticum.org/snp0001.html.

SPINOZA

Spinoza Opera I–IV. Edited by C. Gebhardt. Heidelberg: C. Winter, 1925.

The Collected Works of Spinoza I. Edited and translated by E. Curley. Princeton: Princeton University Press, 1985.

INTRODUCTION

Juhani Pietarinen and Valtteri Viljanen

The explanation of the world in terms of power has been widespread among human cultures. The assumptions concerning such a power or powers differ widely, but most explanatory schemes seem to share the quest for the *ultimate producing factor* that needs no further explanation, and also for something invisible, or otherwise insensible, that nevertheless manifests itself in the world appearing to our senses.

The most common view, all world-cultures considered, has apparently been *power dualism*: what ultimately exist are two kinds of powers, entirely different by nature and opposed to each other. The opposition has predominantly been conceived in such terms as active–passive, rational–irrational, immaterial–material, good–evil, etc. In *power monism* things that appear to us opposite in these ways are explained to be manifestations of just one basic power conceived in itself as insensible, perhaps even fundamentally concealed from us.

The birth of Western philosophy marks a turning point in the history of power-invoking world-explanations. From the time of the ancient Greeks to ours we encounter both power dualism and power monism. The temporal world is explained in terms of active and passive powers; as the Eleatic Stranger of Plato's *Sophist* famously suggests, "I am proposing as a mark to distinguish real things that they are nothing but power". The idea that real existence requires some kind of causal power as its basis—not being causally efficacious implies in a very real sense non-being—has had a wide appeal to Western thinkers, and continues to do so.

What is characteristic, however, for Western philosophy is the interest in the *ordered* features of the world, which, in turn, are thought to presuppose and result from a power that is *rational* in character. Moreover, it is difficult to see how the fundamental power could not be *active* in the sense of being independent from everything else: such power must be capable of being and acting 'in itself', producing effects completely spontaneously, with nothing external affecting it. Given these characteristics, it is understandable that the fundamental active power has so often also been seen as infinite, eternal, indestructible, and unchangeable.

According to the basic claim of dynamistically inclined philosophers, the nature and function of the whole reality, including not only animate 'living' beings but also systems of inanimate bodies, is determined, at least in part, by this kind of active power. And most importantly, it is thought to form the rational essence of human beings, appearing as the ability to rational thought and as striving to achieve freedom and happiness under the guidance of reason.

We can find this idea in full force in Plato's explanation of the world in terms of the world-soul that represents the universal active power of reason (*nous*) in our visible universe and controls irrational passive forces of the material constituents of the world. Plato's ontology is thus based on sharp power dualism, developed most extensively in his *Timaeus*, which turned out to have an enormous influence on the European philosophical tradition. In chapter 1, Juhani Pietarinen considers Plato's dualistic world-explanation 'dynamistically' as an extension of the early Greek idea of *dunamis* as pertaining to the nature or essence of things in virtue of which they exist and act in the characteristic way they do. For Plato, the active power as the capacity of existing 'in itself', in virtue of its own nature alone, was reason, that is, a self-sufficient, eternally existing power that aims at and brings about perfectly good and beautiful order. In contrast to reason's active power Plato introduces the idea of passive power, something essentially receptive and capable of producing by itself only disorder. Plato's enigmatic notion of *chôra* can be understood as a space consisting of receptive powers that form the inherent nature of the purely material reality; the orderly universe, the *cosmos*, is, for Plato, a mixed result of the active power of reason and the passive receptive powers of the space. Plato developed further the notion of soul to explain the interaction between the power of reason and the powers of the space. Pietarinen argues that by interpreting the human soul as a mixture of the active power and the passive receptive powers, both its capacity to everlasting self-controlling actions and its interactions with the material world become understandable.

Interesting developments and changes can be traced in the Platonic world-explanation during its travel through Stoicism, Neoplatonism, and Aristotelian scholasticism to the early modern philosophy. In chapter 2, Håvard Løkke discusses the role of active power in Stoic philosophy. In the materialistic Stoic ontology, the world consists of four material elements: fire, air, water, and earth. These elements, however, are arranged according to two basic principles, one active and

the other passive. Løkke examines the motivation of distinguishing the principles from the elements in the Stoic *cosmogony* and in the Stoic *cosmology*. He argues that in the former two kinds of fire is assumed, the pure eternal one, and the one mixed with air to produce *pneuma*, both fires representing a kind of active principle. As Løkke explains, the former kind of active principle is often neglected and attention is paid mainly to the Stoic cosmology where *pneuma*'s role as the universal causal power in the created world is central. As an active, self-moving power operating in the created world, *pneuma* is called 'the right reason' and 'the law that is common'. Thus, conceived as representing reason and law, the Stoics' materialistically defined active principle still retains the teleological aspect prominent in Plato and Aristotle. This self-moving power, the right reason or common law, causes all changes and qualities in the world by acting on 'the passive' (also called 'the matter' and 'the unqualified substance'), i.e. on something which in itself is without motion and form, without ability to cause anything. Løkke examines in detail the Stoic theory according to which everything that exists, the whole reality, is constituted by a combination of the active and passive principles.

The Stoic theory rejects Plato's idea of reason as something immaterial and develops a view of universal active power within a purely materialistic framework. In this respect it represents ontological monism. Whether it can also be said to represent power monism or dualism depends on how the ontological status of the two basic principles, the distinction between the active and passive powers, is conceived. Although the distinction is made within just one domain, the world of material elements, it does not exclude the possibility of taking the active and passive principles to be ontologically separate. And indeed, this seems to be the case: the material elements of which the active power is said to consist are different from the elements manifesting passive power. Moreover, the material 'bodies' endowed with the former kind of power are capable of existing in itself, independent of anything else. It thus seems justified to take the Stoics to have transferred the Platonic power dualism into a materialist ontological framework.

The Neoplatonist Plotinus develops, apparently as the first Western philosopher, a full-blooded power monism. He rejects Plato's notion of ontologically independent 'material' power and explains the world solely in terms of a unitary and simple immaterial active power ('the One') from which all other aspects or 'levels' of the reality, all possible

forms of things as well as their temporal realizations (including material bodies), necessarily follow in a special manner usually called 'emanation'. In chapter 3, Eyjólfur Kjalar Emilsson discusses Plotinus' hierarchical model of reality, focusing on the order of causal dependence between the different levels. He argues that when 'lower' levels are said to be constituted by 'emanation' (or 'illumination' or 'outflow'), this is just a metaphorical way to refer to an aspect of a view of causation called the 'double act doctrine', according to which any higher level is constituted by an internal activity (*energeia*). In point of fact, Emilsson argues, each level *is* its internal activity; this is what constitutes its substance. At the same time, the inner activity brings about an external activity that constitutes the level below. As the cause of the lower level, it is properly called a power or potentiality (*dunamis*) of the lower. The nature and importance of this kind of double activity, as well as the nature of power involved, is discussed by Emilsson.

The Plotinian brand of power monism has to face the problem of explaining the passivity that so obviously pertains to the nature and existence of material things. The medieval discussion about the active and passive aspects of the world was dominated by Aristotelian hylomorphism, the doctrine according to which natural substances consist of form and matter—arguably a development of Plato's dualistic power ontology. Also the Plotinian idea of emanation led to a lively debate among the medieval philosophers. If God's creation is regarded as a necessary process, an emanation, what should we think of his freedom? Does God's unlimited power imply that he can create any kind of world, or does his freedom merely consist in the fact that the world necessarily follows from his unlimited power so that God can only do what he in fact does? Another cluster of problems in the medieval discussion, stemming from the ethical concerns of the Christian tradition, is concerned with the will of human beings. What can we do with the active power of our souls? How is it related to God's will and power, and how should we understand the relation between the will and the intellect?

The latter set of issues is addressed by Tomas Ekenberg in chapter 4. He explicates the way in which concept of will figures in Peter Damian's, Anselm of Canterbury's, and Peter Abelard's discussions of divine and human power. In particular, Ekenberg unearths the theory of powers underpinning Anselm's central ethical idea, moral goodness as the rightness of the will. In chapter 5, Andreas Schmidt throws light to the former cluster of problems by discussing Thomas Aquinas' view of God's

active power in terms of a modal theory in which logical possibilities are conceived as being grounded on God's omnipotence. Schmidt defends this kind of modal interpretation of Aquinas and argues that it unlocks problems pertaining to Aquinas' view of God's possibilities and freedom. The idea of conceiving 'possible worlds' in terms of God's power was rejected later by Duns Scotus, leaving however, Schmidt argues, the ontological status of logical possibilities entirely open.

These questions, so prominent in medieval discussions, arise again in the seventeenth-century metaphysics, most notably in the works of René Descartes, Benedict de Spinoza, and Gottfried Wilhelm Leibniz. In the metaphysical systems of the early modern rationalists, the idea that all being is constituted by some kind of active power, active in the sense of being self-causing and self-operating, obtained a central place. However, the traditional idea encountered a new challenge: the Aristotelian explanation of motion was displaced by the Galilean laws, and philosophers were forced to find metaphysics squaring with the new conception of natural science. According to the ordinary scholastic explanation, God as the universal rational power makes things move towards a rational order: all motion is directed towards the perfection of the universe. This kind of teleology, however, went against the new conception of natural laws, especially against the Galilean law stating that the motion of a body, if not resisted by other bodies, continues with the same constant velocity. In other words, bodies seem to have a tendency or striving not to a perfect order but simply to maintain their actual motion or in general their actual state. The philosophical challenge was to explicate the nature of this striving.

Interestingly enough, many of the prominent seventeenth-century thinkers, Descartes and Spinoza among them, retained the traditional view that the tendencies or strivings of bodies should be understood as expressing active power, ultimately the power of God. But this raises the question, how does this take place? The relation between the activity of reason and the passivity of matter came once again to the fore. To explain motions and interactions of physical bodies in terms of *active* power, one had to accept either that the active principle comes from somewhere else than the material or extended properties of the bodies, or to think of physical things as intrinsically active. The idea of an ontologically independent universal passive power was generally rejected, and different kind of theories of the nature of the active power and its working in the world were suggested. Descartes

is a good example of the difficulty: he could not attribute any active power to matter and had to conclude that God is the ultimate cause of all motion. Spinoza and Leibniz, for their part, argued that bodies are inherently endowed with active power. One important traditional feature of these new developments was that the Platonic idea of reason as active power was retained.

The aforesaid raises several questions. If activity is taken to mean self-causation and self-operation, how can anything but an infinite power be said to be active in this way? And how should passivity be explained? Where does the inertial striving in bodies come from if all motions are directed by an active power? Moreover, the concept of force (*vis*) of the new physics no doubt had a profound impact on early modern thought concerning power (*potentia*) and related notions; but what kind of impact? The main task for the early modern philosophers was to develop workable metaphysics that could provide an account of the causal efficacy with which finite things—also finite material things operating according to the Galilean laws of motion—quite clearly seem to be endowed; metaphysics that would not be plagued by the complexities and alleged obscurities of its scholastic predecessors and one that would show how finite powers are related to—in fact, stem from—the ultimate power of God, or of the whole nature.

It is interesting to approach Descartes, Spinoza, and Leibniz from the viewpoint of these questions and spell out their answers which, despite having common features, differ from each other in important respects. The way in which certain pertinent problems of the Cartesian metaphysics can be approached from the idea of God's active power is discussed by Juhani Pietarinen and Timo Kajamies. Although, as indicated above, attributing causal power to finite things is *prima facie* problematic for the Cartesians, Pietarinen suggests in chapter 6 that when certain Descartes' assumptions concerning God's power are seen to hold not only of the extended world but also of the mental domain, the Cartesian view concerning the interactions between mind and body appear in a new light. This allows us to propose interesting answers to such questions as, how mind and body, being entirely different kinds of substances, can act upon each other; how the fact that our perceptual ideas do not resemble the objects they represent or the brain states causing them is to be explained; how God, whom Descartes claims to be the cause of all motions in the world, and a finite human will can both be regarded as the cause of producing voluntarily bodily

movements; and finally, how the mind's power of acting on the body can be reconciled with the picture of the corporeal world as a causally closed domain? In chapter 7, Kajamies discusses Descartes' pivotal causal reality principle and explicates the cryptic but important idea of eminent inherence in terms of God's active power. Interestingly, from the viewpoint of the ontology of power Descartes appears not as a dualist but as a monist.

A revealing episode in our cavalcade of theories is offered by Thomas Hobbes' attempt to make motion—not power which he sees in the spirit of the mechanistic era as too 'occult' in character—the ultimate basis of world-explanation. Indeed, given Hobbes' 'official' first philosophy, it seems that no room at all is left for a genuine notion of power. However, Juhani Pietarinen argues in chapter 8 that a different kind of picture emerges if we follow certain assumptions Hobbes makes concerning God's role in the world-order: the bodily world might be seen, after all, as a manifestation of God's active power. On this picture, the central notion of 'endeavour' gains new importance, first of all in providing the basis for the crucial *conatus* principle according to which all things strive to persevere in existence by all the power they possess. And even if the notion of endeavour is not taken to be grounded in God's power, Hobbes is led, at any rate, to assume that it represents one kind of active power, namely the power of human reason, as can be learnt from his political theory: it is the active power of reason that leads people, according to Hobbes, to establish commonwealths with sovereign rulers.

Although Spinoza has not always been seen as a proponent of dynamistic metaphysics, Valtteri Viljanen argues in chapter 9 that he should nevertheless be classified as one. In fact, an analysis of some of the key passages of the *Ethics* leads to the conclusion that it is in Spinoza's thought we find a clear rehabilitation of the notion of power (*potentia*), contested as it became in the beginning of the modern era. Viljanen shows how Spinoza's concept of power and such related concepts as force (*vis*) and striving (*conatus*) connect with his rather strong brand of essentialism in which things are ceaselessly causally efficacious, or powerful, in virtue of their essences. This together with Spinoza's necessitarianism and monism leads to an actualist model of power according to which God's—who is the only substantial entity—monistic power necessarily and purely actively realizes all the possibilities. However, in the case of finite things this model faces some notable complications:

God's limited modifications as we are, not all of our power can ever be actively exercised; but the central idea is that as long as any finite thing exists, it always, and in virtue of its own nature alone, uses all of its power. This framework, discarding the traditional potential–actual framework but retaining some of its most important essentialist features, functions as the basis of Spinoza's naturalistic ethical project: human rationality and happiness equal, in the final analysis, active use of one's intrinsic power.

Leibniz, often hailed as the father of dynamistic thought in the modern era, adopted some very important ideas from the tradition, and Immanuel Kant, inspired by Leibniz, developed his own view of the nature and role of active power in the world. In chapter 10, Arto Repo and Valtteri Viljanen give an account of Leibniz's concept of force (*vis*), so important both for his physics (which he himself dubs 'dynamics') and metaphysics. Starting from Leibniz's critique of the Cartesian conception of extension, Repo and Viljanen show how Leibniz's broadly dualistic view of power—there are two kinds of powers, active and passive, the former connected with something akin to scholastic substantial forms, the latter to matter—is transformed into an idealist position according to which the fundamental constituents of the world are mental and non-extended substances, the monads. These monads, in turn, are endowed with power to transfer themselves, completely spontaneously, from one perception to another. Thus, in his monadology Leibniz appears to develop one variant of power monism. However, as the monads of Leibniz's mature metaphysics are not causally interconnected with each other, a peculiar dilemma arises: how should we understand the distinction between activity and passivity in a framework which has *prima facie* no room for passivity at all? Repo and Viljanen also explicate the way in which Leibniz tackles this problem.

In chapter 11, Arto Repo and Hemmo Laiho focus on questions concerning active and passive powers in Kant's so-called precritical and critical writings. The first part of their essay examines certain developments in Kant's view of what is involved in causal interactions between finite substances in nature. The second part deals with the important question of the possibility of free activity of human will. According to Kant's famous argument, it is conceivable to see human beings both as passive receivers of external impulses and as absolutely free agents. Kant sees the possibility of human freedom in the power of actively resisting various inclinations originating from the sensible world. Repo and Laiho end their essay with a discussion on the nature of this power.

From later philosophers of special interest are Arthur Schopenhauer and Georg Wilhelm Friedrich Hegel, who, notwithstanding the fact that they differ from rationalists in many respects, are still immediately relevant for the dynamistic tradition in metaphysics. In chapter 12, Andreas Schmidt examines the way in which the notion of power or force is conceived in Hegel's *Phenomenology of Spirit*. In keeping with his general project of overcoming traditional metaphysics, Hegel rejects the idea of explaining the sensible world in terms of an infinite power or force as inadequate and offers the notion of Concept as the ultimate principle of activity. The Concept should not be conceived as anything expressing itself in the objects of the world, nor as a power generating things. It is, in Schmidt's words, "a transcendental condition of there being any entities at all". Its activity consists of everlasting conceptual movements that take place through inherent contradictions, and in this sense the power of the Concept can neither be revealed or actualized in the world of finite things nor be something ultimately completed and immutable.

In Kantian spirit, Schopenhauer makes a sharp distinction between the phenomenal and the noumenal realms. Valtteri Viljanen argues, in the final chapter 13, that Schopenhauer's conception of both of these domains is inherently dynamistic in character. Most often, Schopenhauer characterizes the metaphysical basis of reality, the thing in itself—or the *will* (*Wille*) as he chooses to call it—as endless and blind striving to produce existence; so in a very real sense, Schopenhauer turns out to be a classic proponent of power monism. With regard to the phenomenal realm, Viljanen interprets Schopenhauer as developing a field theoretical view of the world of our senses: an object of experience is constituted when the spatio-temporal field of causally efficacious matter obtains a specific state, as determined by the contest of natural forces. Schopenhauer has exerted, especially through Friedrich Nietzsche, enormous influence on the intellectual climate of the last century. Thus questioning the rationality of the world does not mean that the view of the world as a dynamic whole would have become obsolete—quite the contrary.

* * *

In brief, this book is a collection of essays that discusses the idea of a universal, rational, and active power and its development in European thought, especially in Plato, Stoicism, Neoplatonism, early and late medieval scholasticism, Descartes, Hobbes, Spinoza, Leibniz, Kant,

Hegel, and Schopenhauer. The idea for this anthology arouse out of discussions in the so-called 'Rationalist Circle', an informal group initiated by Professor Olli Koistinen at the Department of Philosophy, University of Turku. We are deeply grateful to all those who have, over many years, taken part in these discussions. Finally, we would like to acknowledge with gratitude that the editorial work on this volume has been financially supported by the Emil Aaltonen Foundation.

CHAPTER ONE

PLATO'S DUALISM: THE COSMOS AS ACTIVE AND PASSIVE POWER

Juhani Pietarinen

Introduction

In this chapter, I propose a thoroughly dynamistic interpretation of Plato's explanation of the sensible world. It can be briefly summarized as follows.

Plato (427–347 BC) developed, most notably in the *Timaeus*, a picture of the world which may be called *power dualism*. According to this kind of dualism, the basic constituents of reality are active and passive powers. For Plato, infinite divine reason (*nous*) represents a purely active power; this kind of power is wholly independent from but still able to affect things outside its realm. In virtue of this power, reason is a self-sufficient existent, capable of being entirely 'in itself' or 'by itself'. It is this active rational power that makes the Platonic cosmos essentially teleological: the *telos* of reason is the absolutely beautiful order, perfect harmony. The Platonic forms can be understood as perfect realizations of this active power, and to the extent there is order in our sensible world it is due to this power.

In contrast to reason's active power, Plato introduces the idea of irrational and passive powers—irrational in the sense of being devoid of all *telos* of their own, and passive in the sense of being subject to external influence. On their own, these powers produce merely chaotic disorder. Plato's notion of space (*chôra*) should be understood as consisting of such irrational powers. Passive irrational powers form the material nature of the four kinds of simple bodies (air, fire, water, and earth) of which the bodily world is composed.

Plato's important idea is that the generation of the orderly universe, the cosmos, is a result of a continual contest of the two kinds of powers, the active power of divine reason and the passive powers of the space. Through their combination, the cosmos receives its basic nature as a living being by which Plato understands a union of soul and body. By its

active power, the divine reason endeavours to reproduce in the cosmos, as completely as possible, the same pattern of perfect living being it has produced in the realm of ideal forms. The perfect living being may be understood as a complex formal structure involving the structures of all different kinds of living beings conceivable by the infinite power of the divine reason. The actual cosmos should then be considered as the best possible 'imitation' of the perfect living being; it comprehends the actual realizations of all the different kinds of ideal living beings. Accordingly, both the soul and the body of each actual living being have a formal structure similar to their ideal models.

The body of an actual living being is compounded of simple bodies in accordance with rational teleological principles; the power of reason gives them a certain formal structure and strives to maintain it against the irrational powers inherent in their basic constituents, simple bodies. However, due to these irrational powers, bodies are by nature incapable of any purposive behaviour; therefore living beings are equipped with souls. To follow Plato's general idea, also the souls of actual living beings should be thought of as combinations of reason and necessity, that is, of active power of reason and receptive irrational powers. In virtue of the former, each individual soul is self-subsisting, self-moving, and self-controlling, and in virtue of the latter, each soul is capable of interacting with the material world. This seems to be Plato's account of the possibility of mind-body interaction.

Being as power

In Plato's *Sophist*, the Eleatic Stranger (Plato's spokesman) proposes tentatively the following distinctive feature for being, for what truly is:

> I suggest that everything which has power [*dunamin*] of any kind, either to affect anything else or to be affected even in the least degree by a slightest thing, and even if it only happens once, truly is [*ontôs einai*]. For I set up nothing else than power as the mark of things that are [*ta onta*].[1]

The proposal claims that being amounts to having power to act on something (*to poiein*) or, equally well, to be acted upon by something (*to pathein*). It is meant as a general answer to the question about the

[1] *Sophist* 247d–e.

nature of being common to both bodiless things and things which have a body (247d).[2]

How does it apply to the two kinds of things? As it stands, the proposal presupposes two different things interacting with each other, the active part causing a change in the passive part. This means that the latter will no longer remain the same in all respects, for by receiving some of the power of the causal agent its *dunamis*, in virtue of which it in turn will affect other things, will be changed. This is a familiar model of causal interaction in the bodily world. It should be noticed that in this model also the active part will be subject to change. When a hot oven warms up the room, it will lose heating power and will at least in this respect become different. Thus, the Stranger's proposal seems to cope well with material things, for they satisfy both of its alternative criteria of being.

The situation seems to be quite different in the case of bodiless things. Do Plato's paradigmatic examples of *ta onta*, the ideal forms, have power to affect or being affected? The question is raised in the *Sophist* with respect to knowing: does knowing the forms somehow involve affecting them or becoming affected by them (248a–b)? Knowing is taken by Plato as power, "the most potent of all powers [...] set by its nature over what is" (*Republic* 477b–c). Knowing something might therefore be thought of as interaction in which what knows (the reason) is acting by its power on what comes to be known (a form) and is being acted upon by it, in analogy to sense perception in which, according to Plato, coming to perceive something involves both affecting the object and coming to be affected by it. But the possibility that the forms might be something changeable would entirely ruin Plato's doctrine of knowledge as infallible, free from all error, a doctrine defended forcefully in the *Republic* (477d–478b) and in other middle period dialogues, and also held in the *Sophist* (249d) and the *Timaeus* (52a).[3] His firm position seems

---

[2] The notion of being should be understood in the existential sense. For a defence of this reading against the view that Plato would not be concerned in the *Sophist* with existence but with reference and predication, see Leslie Brown's "Being in the Sophist: A Syntactical Enquiry". It should be noted, however, that unlike our 'existence', the 'being' in Plato admits of degrees: things may have more or less being depending on the active power they possess.

[3] Some scholars, most notably J. M. E. Moravcsik ("Being and Meaning in the *Sophist*") and G. E. L. Owen ("Plato and Parmenides on the Timeless Present"), have argued that Plato would have been willing to accept the idea of knowing as acting on what comes to be known, in analogy to what is involved in perception, and therefore to give up the doctrine of the immutability of the forms. Although Plato leaves some

to be that the forms cannot enter into any causal interaction, neither as the active nor as the passive part. Every form, he claims in the *Timaeus*, is an unchanging thing which "neither receives into itself anything else from anywhere else nor itself enters into anything else anywhere" (52a). The Stranger's hallmark of being seems thus to exclude the forms from the class of existents, and this of course was not an acceptable option for Plato.

On the other hand, Plato points out that if the domain of what 'truly is' is thought to consist of the unchanging forms alone, then all living beings, i.e. bodily entities endowed with reason and soul, will be left outside, and to grant this would be "a terrible admission" (*Sophist* 249b). In his view, the soul is a moving thing, having power to affect the body in which it resides and to become affected by it. In spite of being liable to change, souls endowed with reason should be taken to possess real being, which would not be the case if the realm of being would consist of immutable forms alone. But Plato also makes clear that reason, the soul's capacity of thinking clearly, would be nothing without things which are "the same in the same manner and in the same respects" (249b), that is, without the forms to which the soul has access through reasoning alone. The upshot would seem to be that both what is immutable and what is changing are to be included into the whole realm of true being (249d).

What would then be the common feature that makes both the forms and the souls to have true being? The Eleatic Stranger's proposal will not do, for in contrast to souls the forms have no power for affecting or being affected. The forms are self-subsisting things; their being does not depend on anything outside them, from which it follows that the notion of *dunamis* central in the proposal does not apply to them.

The idea of thinking being as power comes from the traditional understanding of *dunamis* as the nature or essence of things that

---

room for divergent interpretations here, the evidence for such reading is insufficient. Leslie Brown has recently argued for a less radical option: what Plato might have accepted is that the forms have power to affect while being immune from being affected ("Innovation and Continuity", pp. 199–200). This would satisfy the Stranger's *dunamis* proposal without sacrificing the doctrine of the immutability of the forms. Brown refers to passages where the presence of the beautiful (*Phaedo* 100d) or the justice (*Sophist* 247a) is said to make a thing beautiful or just, thereby affecting them. Similarly, he suggests, Plato might have thought of coming to know something as becoming affected by this object. This is an interesting suggestion but runs against what Plato explicitly claims for instance in *Timaeus* 52a.

manifests itself as certain characteristic actions and reactions.[4] Things are what they are in virtue of their power of acting and being acted upon. Plato adopted this view. For example in the *Phaedrus* he reminds of "what Hippocrates and true reason" say about the method of studying the nature of any material object: we have to analyse complex objects into their simple constituents and investigate what kind of power for acting and being acted upon each of them has (270d). However, unlike Hippocrates and the materialist philosophers, Plato did not restrict the idea of *dunamis* to the sensible domain but extended it to immaterial entities, referring by the term in general to the capacity or power of any thing, be it material or immaterial, to accomplish its *ergon*, the work or task the thing is best suited to. When he begins in the *Republic* the inquiry into the nature of justice and injustice, the first questions raised are "what power each in itself has when it is in the soul" (358b), and what kind of effect each of them has "by its own power when present in the soul of the person who possesses it" (366e). Similarly, the materialists are persuaded by the Eleatic Stranger of the *Sophist* to concede immaterial justice as real because of its capability of making, by its presence, a soul just (247a).

On this understanding of the notion of power, however, the Stranger's criterion of being does not apply to Platonic forms. Did Plato reject the idea of reality as power? The *Sophist* leaves us confused, nor can we find a definitive answer anywhere else in the Platonic corpus. I will argue, however, that Plato took the idea of *dunamis* seriously and, by giving a special meaning for the notion of power, built his ontological theory on it.

Reason as active power

Let us begin with Plato's conception of causal interaction in the corporeal world. Here one and the same object can be both active and passive; the oven heated by fire has active power with respect to the room warmed up but passive power with respect to the fire. However,

[4] F. M. Cornford, referring to Souilhé's analysis, summarizes Plato's view of *dunamis* as follows. It is something that "may be manifested under one or other of two aspects: as an activity or principle of action, of movement, or as a state or principle of passivity, of resistance, [and] by either aspect, or sometimes by both, it unveils the inmost and hidden nature of things; still more, it distinguishes their essence" (*Plato's Theory of Knowledge*, pp. 236–237).

importantly, the activity of the oven is not inherent to it but due to the oven's receptivity to the power of the fire; the heating power does not belong to the essence of the oven but is received from the fire. This kind of interaction is, according to Plato, characteristic to the material world, where "all things of all sorts arise by intercourse with each other, as a result of their motion" (*Theaetetus* 157a). The active and passive power of bodies cannot be conceived as separate entities, since "nothing is active until it meets with passive, and nothing is passive until it meets with active; and that which meets with something as active appears again as passive when it comes in contact with something else" (*ibid.*). And since our sense organs are part of the material world, also they function according to the relative alteration of activity and passivity.

The important point Plato makes in this connection is that the changing states of bodies do not tell anything of the *true being* of bodies. No quality which results from the interaction of active and passive powers of particular bodies, like 'hot' and 'hard', has any *being in itself*:

> The conclusion of all this is that no thing is one, itself in itself [*auto kath' hauto*], but everything is always generated in relation to something else, and the being of it is to be ruled out altogether.[5]

Here 'being in itself', or 'by itself', is distinguished from 'being generated', that is, from the way sensible things begin their existence through causal interactions. To be in itself means to remain in all respects the same, without change. This is how Plato contrasts the being of forms to the way sensible objects should be thought to exist.[6] Interestingly, the Eleatic Stranger of the *Sophist* reminds us of this distinction: "I think you will admit that in speaking of existing things, some are said to be in themselves and some always in relation to another" (255c). Admitting this means that the Stranger's tentative proposal for the mark of being must be rejected as it stands, for things which are in themselves fall outside it. This conclusion, however, is never explicitly made in the dialogue; the question concerning the suitability of the proposal to ideal forms seems to be left open in the *Sophist*.

---

[5] *Theaetetus* 157a–b.

[6] E.g. *Phaedo* 78d: "Does each thing which is uniformly in itself remain the same and never in any way admit of any change, or do they vary from one time to another?"; *Symposium* 211b: the form of beauty "is not in any another thing […] but is for ever uniform and in itself".

Still, there is one important possibility that remains available. If being or existing is power to affect or be affected, then being in itself amounts to the power of determining what and how a thing is and acts *with respect to itself*. A thing which is in itself is what it is in virtue of its own power, so that it, in so far as it is in itself, necessarily remains the same, unaffected by anything else. The power that manifests itself in this kind of being is active in a stronger sense than the power by which corporeal things affect each other in causal interaction: *it works entirely independent of any other power*. Things possessing this kind of power are self-active, in contrast to material bodies the power of which is always controlled by external causes. There is thus a sense in which the Stranger's proposal could apply to the Platonic forms: their being amounts to self-active power. For some reason discussion about this possibility is disregarded in the *Sophist*, although evidently the idea of autonomous, self-active power plays a central role in Plato's ontology. He takes it, I would like to argue, to be the power of reason.

Consider the famous passage of the *Phaedo* where Plato tells us how reading Anaxagoras made him think of reason as the cause of all order in the universe; "it is reason (*nous*) that puts everything in order and arranges things in the best way" (97c). He saw here a reasonable guide for research: we have to look how things are, how they affect other things and become themselves affected, and then ask why just this kind of arrangement should be the best one. This would lead us to understand the nature and aims of the rational cause behind the observable phenomena. To Plato's disappointment, however, Anaxagoras invoked, like other natural philosophers, only material causes, "without looking for the power (*dunamis*) which causes things to be now placed as it is best for them" (99c). Plato could not think of rational power as anything other than immaterial. In his ontology, developed most expressly in the *Timaeus*, the notion of reason became to mean universal active power striving to establish good and beautiful order wherever it has any influence. The power of reason is thus in Plato entirely teleological. It is also self-realizing in the sense of necessarily achieving its *telos* whenever nothing prevents; it should thus not be understood just as a mere potentiality or ability.[7]

[7] This conception of power seems to be at the core of what A. O. Lovejoy has named 'the principle of plenitude'. According to the principle, no genuine potentiality of being remains unfulfilled. Lovejoy convincingly shows the significance of the principle in Plato's ontology and cosmology, in particular in the explanation of the world order as

This opens up an interesting way of understanding Platonic forms. They can be seen, as a whole, as complete realization of the *telos* of limitless reason, as the perfect and unchanging order which lovers of wisdom should look at and study (*Republic* 500b). The evidence for this kind of interpretation comes somewhat indirectly, mainly through what Plato says about the perfect goodness, the good itself, as the cause of the forms. According to the important claim of *Republic* 509b,

> the objects of knowledge receive not only their being known from the presence of the good, but also their being [*einai*] and essence [*ousia*] come from it, though the good itself is not this essence but still transcends the essence in dignity and surpassing power.

The use of both 'being' and 'essence' here is hardly accidental. Plato's point seems to be that the good itself is *power* in virtue of which the forms, as objects of knowledge, are not only capable of being eternally and immutably in themselves, but each of them also obtains an essence which makes it exactly and distinctly the form it is. On this reading, both the eternal being of a certain form and the particular way this being becomes instantiated by it, its mode of being so to speak, are caused by the power of the good. Understood as full realizations of this power, the forms can be said to be things which exist or are *completely* or *purely* (*Republic* 477a). In virtue of the power of the good, forms have an essence that makes them perfect or ideal objects of their kind. Most naturally, the good itself should be taken as their formal cause: it is by its 'presence' each form obtains its well-organized structure and the whole system of forms the perfectly harmonious order.[8] All possible

---

the necessary result of the Demiurge's rational power. See *The Great Chain of Being*, chapter 2, esp. pp. 46–54.

[8] Cf. *Philebus* 64e: "Now, we see that the power of the good has taken refuge in the nature of the beautiful; for measure and proportion manifest themselves everywhere as beauty and virtue." Gerasimos Santas interprets the good itself as the formal cause of Platonic forms and as their superlative goodness of kind ("The Form of the Good in Plato's *Republic*", p. 257). On his account, the excellence of the forms is entirely due to certain ideal attributes, i.e. attributes which they have in common in virtue of participating in the perfect goodness, in contrast to their proper attributes which have no share in it. For example, the form of the square has the proper attribute of containing four right angles, but because this attribute does not come from a participation in the good, it contributes according to Santas nothing to the superlative goodness of this particular form (p. 268). It is only the ideal attributes like existing by itself, being always and unchangeably the same etc. which, according to Santas, contribute to the goodness of forms. However, this does not seem plausible to me. How could it be that containing four right angles has nothing to do with the form of the square's being the best exemplar of its kind? And from where does this property come if not from

forms follow necessarily from the good's rational power. Considered in this way, the good in itself is not like a form among other forms but indeed surpasses them as limitless rational power in virtue of which each form has its characteristic essence and is capable of being wholly and purely in itself.

The idea of the good as an all-surpassing power that creates order comes forcefully to the fore in the *Timaeus*, in the disguise of the divine craftsman, the Demiurge, who represents, according to Plato, the best there can be: perfect reason, perfect beauty, perfect goodness—all what Plato says the good in itself is.[9] The craftsman-god of the *Timaeus* may thus be taken to represent the infinite power of reason finding its complete realization as the good and beautiful system of the forms.[10] And, according to the basic idea of the *Timaeus*, the divine craftsman strives to establish the same kind of order in the sensible world, but here

---

the perfect goodness from which Plato says the being and essence of all forms come? Santas himself points out how at least in the case of the form of the justice Plato seems to suppose a strong entailment connection between the proper attribute of the form, being just, and the good itself, and admits that this is what there ought to be. But then, he remarks, the question arises on what grounds the goodness entailed by being just can be supposed to be the same as the goodness in virtue of which all other forms are the best objects of their kind (p. 267). But does this kind of problem arise? If we think of the essence of forms as a purely formal structure, then each form may be taken to have a distinct essence that expresses, in a certain particular way, the same rational power of the good; although the ideal square and the ideal soul have entirely different structures, they still have common formal properties, most importantly a harmonious organization of certain basic constituents. This formal structure remains eternally the same and counts thus as an ideal attribute. As *Republic* 509b asserts, the good itself is not one of the particular structures, nor presumably a hyperstructure composed of them as Gail Fine suggests ("Knowledge an Belief in *Republic* 5–7", pp. 228, 244), but the formal cause of all of them, in my interpretation the power which manifests or expresses itself as such structures.

[9] The creator of the cosmos is said to be the most excellent of all that is rational and eternal (*Timaeus* 37a). According to Lovejoy, it is "at least a probable conjecture […] that the Demiurgus of the *Timaeus*, as 'the best soul,' may be regarded as possessing fully the attributes of 'that which is good in itself'—however figurative we may suppose the greater part of the characterization of it to be" (*The Great Chain of Being*, p. 48).

[10] T. K. Johansen suggests that the divine craftsman of the *Timaeus* should be understood as the craftsmanship of the creator of the world rather than as an individual or person who possesses it. Such a reading underlines, he says, that "what it means for the demiurge to create the world is for the demiurge's *craft* to be exercised" (*Plato's Natural Philosophy*, p. 84). He remarks further that craftsmanship is something that necessarily creates order: "Craftsmanship itself, paradigmatically represented by the divine demiurge, will exercise itself whenever the opportunity arises" (p. 86). This is in accordance with my interpretation according to which the Demiurge will necessarily create the most beautiful order by his proper craft, the power of reason, whenever and wherever nothing prevents.

the success can only be incomplete because of the resistance of powers inherent in the materiality of the world; the actual sensible things fall necessarily short of the perfection of their ideal counterparts.

Generation of the sensible world

The inquiry into the nature of the sensible world is opened in the *Timaeus* by contrasting the two basic kinds of being:

> What is that which is always being, having no generation, and what is that which is perpetually generated but never being? The former, being always in itself, is apprehended by rational thinking, and the latter, being generated and perishing but never purely being, is grasped by opinion based on irrational sensation. But everything generated must of necessity be generated by some cause, for it is impossible for anything to become generated without a cause.[11]

The claim here is that things which are generated cannot be *purely* in themselves; what they are does not depend on their own essential power, not at least on it alone, for generation involves a change whereas things which are in themselves are eternal and unchanging. And a changing thing must have passive, receptive power, for it receives something from external causes or loses something to them, and no thing can alter itself in any way by the power that determines its unchanging being. Thus for all change, for all generation and perishing, an external cause is needed. This is not, however, to deny of generated things *all* power of preserving themselves unchanged. What Plato wants to say is that they cannot be *entirely* or *purely* in themselves, that is, their being is not as complete as the being of the ideal forms. Indeed, we should expect sensible things to have at least some power of maintaining their self-identity, in addition to the receptive power that makes them subject to change. The core idea of Plato's explanation of the sensible world seems to be that things in it have both kinds of power. How do they obtain these powers?

Let us consider first the former kind of power. Because the sensible world is generated, there must be a cause that has changed something to something different.[12] This change, Plato argues, has been from worse

---

[11] *Timaeus* 27d–28a.

[12] Plato precludes the possibility of generating something from nothing; like all craftsmen, also the Demiurge needs material for design.

to better, for the resulting cosmos is "the most beautiful of all things generated" and, accordingly, the cause of this change must be "the best of all causes" (*Timaeus* 29a).[13] The ultimate cause of the generated world with rational order must be the supreme good represented by the Demiurge. But *what* became changed by this godlike power in the generation of the sensible world?

> The god wanted all things to be good and nothing worthless, as far as it was in his power, and took over all that was visible, but seeing that it was not at rest but in discordant and disorderly motion, he brought it from disorder into order, deeming that order is in every way better than disorder.[14]

The sensible world was created by bringing order into something that was in disorderly motion. This is the chaotic space, *chôra*, the nature of which will be discussed below (in the section "The problem of change").

In creating the world order, the Demiurge used as his model "that what is eternally in itself" (28a) and "apprehensible by reason" (29a) to make his work as good as possible. The sensible world is thus moulded after the pattern constituted by the system of forms. In this way the power of reason becomes manifest also in the sensible world, as can be read from *Timaeus* 28a: by using the eternal model the Demiurge guarantees a good result when producing "the form and power" of the visible things he fashions. The term 'form' (*idea*) should be taken to refer here to the actual realization of the ideal structure of an actual thing, and in virtue of the power obtained thereby each thing strives to preserve this form as perfectly as possible. In this way, the sensible world as a whole, as well as each part of it, becomes endowed with a kind of intrinsic teleological striving for perfection, with an endeavour

---

[13] Plato does not explain why the cosmos should be thought as the most beautiful among the generated things. If our knowledge of the sensible world is entirely based on irrational senses, as he claims (*Timaeus* 28a, 28c), then the beauty of the cosmos should be merely a matter of fallible belief: it only *seems* to us to be beautiful, perhaps more beautiful than anything. But this is obviously not what Plato wants to say; the claim of the beauty of the cosmic order cannot be based on sense experience alone but must also be supported by the testimony of reason. Our sense experience and rational thinking are assumed by Plato to be somehow related, as will be discussed in the section "Cosmos as the object of belief and knowledge" below.

[14] *Timaeus* 30a.

to become as close as possible to its ideal form.[15] And the power of sensible particulars that appears as striving to perfection is nothing but power of reason. The Demiurge, finding that no visible thing lacking reason will be more beautiful than one possessing reason, and that nothing apart from the soul can possess reason, placed reason within soul and soul within body to make the universe the best and most beautiful (*Timaeus* 30b).

Plato calls the composite whole of the soul and the body generated in this way 'a living being' (*zôion*). At the end of the *Timaeus* Plato describes the sensible world as the best and most complete cosmic order:

> This cosmos has received the mortal and immortal living beings and is filled up with them, a visible living being embracing all visible living beings, a visible god, image of the intelligible living being; as the greatest, best, most beautiful, and most complete this universe has come into being, one and unique of its kind.[16]

The cosmos generated by the Demiurge is full, complete and unique; there could not be any other kind of world besides this. Why is it so?

Plato's account is briefly as follows.[17] By the power of reason the Demiurge conceives the best possible living being: it should be entirely complete in the sense of comprising all living beings which can be apprehended by reason alone, i.e. all conceivable kinds of living beings

---

[15] At least in one context Plato explicitly uses expressions which refer to this kind of striving. As a part of the *Phaedo*'s famous argument for the distinct existence of ideal forms from sensible particulars, Socrates points out how we are aware of the imperfection of our sense experience—how, for example, the perceived equality of two sticks or stones falls short of the perfect equality. Seeing this, he says, we realize "that these objects strive (*oregetai*) to be like perfect equality but fall short of this" (74e–75a; the same term 'striving' is repeated in 75b). He also says that the objects 'want' (*bouletai*, 74e) or 'are eager' (*prothumeitai*, 75b) to be like the form of equality. Gregory Vlastos objects to taking these expressions as meaning literally striving; it would mean saddling Plato with absurdities, he says (*Platonic Studies*, p. 83 n. 19). Now, perhaps it is absurd to think of two equally looking sticks or stones as striving to attain perfect equality, but it is less absurd to say of a stick or a stone that it strives to keep its form (that is why these things exist as particular objects!), and far less to ascribe to plants and animals a striving to stay alive and flourish as perfectly as possible.

[16] *Timaeus* 92c.

[17] The explanation of the generation of the sensible world is described by Plato as a likely story or a likely account (29c–d), because an account must be "of the same order as the things it interprets" and changing sensible phenomena are necessarily less clear to us than things discoverable by the aid of reason alone. Plato's likely account is a kind of inference from sensible data to the best or most plausible explanation.

(30c).[18] Like all ideal forms, this is unique; so there is just one perfect intelligible living being. And when the sensible world is generated according to this model, by forcing its pattern into the disorderly motion of matter, just one world of sensible living beings results, a unique world, the best and most complete "containing within itself all the living beings which are by nature of its kind" (31a), i.e. all sensible living beings. This world is necessarily what it is, and the richest one possible with respect to living beings.

The generated cosmos should thus be thought of as an incomplete realization of the ideal forms of living beings in the durational and material reality, whereby each particular living being (man, bird, fish, cat, flower, etc.) obtains a certain kind of bodily form (appearing as bodily structures and processes) and the power to maintain it. Let us speak of the latter as the actual forms of things in distinction of their ideal forms. According to this account, the power of reason is the source of the structural forms of living beings, both the ideal ones in the intelligible world and their actual images in the sensible world. It is this power that is responsible for the true *being* of things: to have power to preserve one's form, ideal or actual, means to be able to be 'in and by oneself', that is, to exist in virtue of one's own power alone. The ideal forms are complete realizations of this power, while the actual forms necessarily remain only more or less incomplete images of them.[19] The more an actual living thing has this kind of active power, the closer it comes to its model, that is, the more it 'participates' in its ideal form and possesses the same kind of being or reality.

Because the power of reason determines what things truly and permanently are, it is natural to think of it as the essence or nature of things. Plato's cosmos is built up of living beings which are capable, in virtue of the rational power they possess, of two things: striving to maintain their actual bodily forms and determining their own actions. However, the amount of this power varies between living beings as well

[18] Spinoza's account of the rational power of God as the cause of all things in nature has striking similarities to Plato's: "From the necessity of the divine nature there must follow infinitely many things in infinitely many modes (i.e., everything which can fall under an infinite intellect)" (E1p16; for the method of reference, see p. 215, n. 5).

[19] For example, as described in *Timaeus* 31b–32c, the body of the universe consists of the four simplest bodies (fire, air, water, and earth) fixed in amounts in accordance with geometrical proportion. "This is an element of rational design in the structure of the world's body, and it belongs here among the works of Reason", Cornford writes (*Plato's Cosmology*, p. 43).

as between individuals of the same kind; for example, humans have more rational power than apes, and philosophers more than sophists, according to Plato. Moreover, to what extent a living being is able to exercise its power varies according to the circumstances in which each one is living, and depends, at least in the case of humans, on the education and training of the soul (more of this in the two last sections). However, by striving to keep their actual forms as perfect as possible all living beings, of the lowest degree of rationality to the highest, contribute to the perfection of the whole cosmos. Within this whole, each of them has a special function, an *ergon*, and it is precisely the power of the actual essence in virtue of which a living being performs its proper function.[20]

The problem of change

We have thus far traced how Plato explains the ordering of the cosmos to take place according to the paradigm of the intelligible living being. Let us turn next to the question of *what* became ordered in this way.

When Plato begins to consider this question in the *Timaeus*, he strongly emphasizes how strange and unusual study is to be expected (48d). The explanation of the generated world in terms of rational power seemed severely insufficient, for the cosmos is sensible and full of changing events but what originates from the power of reason are only abstract unchanging forms and structures. Our world consists of

[20] In *Republic* 1, the work or function (*ergon*) of a thing is defined as that which the thing can perform better than anything else, and a thing is said to be good, or endowed with virtue (*aretê*) when it performs its function better than others of its kind (353a–b). Thus virtue means power to accomplish well what a thing is designed for, as is explicitly stated later in the *Republic*: it is in virtue of the power (*dunamis*) each thing is able to perform its function, the better the more power it has for this (477c). When this power is understood, as I suggest, as representing ultimately the power of reason which for Plato is the highest good, the question raised by Santas can be answered. Santas asks how the theory of goodness of the *Republic* 1, according to which the goodness of a thing is an ability to perform well the function proper to things of that kind, coheres with the idea of things being good in virtue of participating in the good itself. Presumably Plato thought that the more a thing participates in the form of its kind, the better it performs the function proper to things of its kind, but, Santas remarks, he does not give any reason for why it should be so ("The Form of the Good in Plato's Republic", p. 266). In the light of my interpretation, the relation between the two criteria of goodness becomes obvious, and presumably Plato thought it to be obvious. Actually, what Santas takes to be two different theories of goodness amounts to just one, the participation theory, as should be expected.

both order and change, and order is accountable by the power of reason. But to explain the changing aspects of the cosmos, Plato must make a new fundamental assumption: something entirely different from the rational power must be involved in changing phenomena. In addition to the paradigmatic forms and their sensible 'copies', a third kind of thing must be presumed (48e–49a). What could it be?

Plato's first point concerning the new kind of existent is that it must have receptive power:

> Our account compels us to attempt to reveal in words a kind of thing that is difficult and obscure. What kind of power [*dunamis*] and nature [*phusis*] we must think it to have? This above all: it is a receptacle of all what is generated, and a kind of wetnurse.[21]

We are concerned with "an invisible and formless, all-receptive kind of thing" (51a), with something that is "by its nature a moulding-stuff for everything, being changed, shaped and reshaped by the things that enter it" (50c). Plato also speaks of space (*chôra*) which provides an abode for everything that is generated (52a). His notion of space, however, should not be understood as referring to an empty place or container where living beings and other sensible things are placed. It must be something that can be 'moulded' by the power of reason, which moulding should result in the actual beings as images of the eternal living beings. An image or copy cannot exist in an empty space but needs some medium to contain it, and this holds also of the actual things as copies of their eternal forms: they come to be "in something else, on pain of being nothing at all" (52c). To be all-receptive, the space must be liable to any kind of influence the power of reason may have on it in generating the cosmos.

On the other hand, the space is also able to resist the power of reason, somewhat like the soil that is both receptive to the efforts of farmer to improve it into the ground of garden and also resists them.[22] Because of this resistance the sensible things necessarily fall short of their paradigms. Like receptivity, the ability to resist belongs to the inherent nature of the *chôra* (see the next section).

Why is it difficult, as Plato claims, to reveal the exact nature of the space in words? The main reason seems to be that *chôra* entirely lacks

---

[21] *Timaeus* 49a.

[22] Sometimes Plato uses the word *chôra* in the sense of soil or farmland to be cultivated (e.g. in the *Laws* 740a, 745d).

the kind of being characteristic to the forms and, to a lesser extent, also to sensible things. The space is by nature passive, totally incapable of being 'in itself'. There is nothing in it that could be said to remain the same, however short a time. This means in Plato's view that it cannot be known by reasoning, for reason comprehends only unchangeable forms, and the space lacks forms of all kinds. Furthermore, because of being invisible, it cannot be known by observation, either. Plato says we must approach the question about the nature of the space by a kind of bastard reasoning (52b), meaning apparently that we must use both observations and reasoning.[23] Our senses witness changing things, and our reason tells us that the power which causes permanent order cannot simultaneously be the cause of change; therefore another kind of power must be assumed. It seems that the space is introduced by Plato as a complete opposite to the unchangeable forms. The forms remain eternally the same, they are completely in themselves, in virtue of their own power alone, whereas the space entirely lacks the power of being in itself, that is, of remaining unchangeably the same. The actual cosmos, in turn, has features of both. It contains stable structures and perpetual flux, mixed with each other in such a way that no demonstrably true account of the nature of the sensible things is possible, only a likely story.[24]

A changing thing becomes somehow different from what it was, while in some sense it also remains the same; it is the same apple tree that looks now quite different from what it looked like ten years ago. What makes it the same, and what different? On my interpretation of Plato's account, a sensible thing remains the same as far as it maintains its actual form by the active power it possesses. But what makes it different must come from something else, from something external to its essence, for it is impossible that the power by which something maintains itself as the same would also cause it to become different. "The different is always seen in relation to another thing, isn't it?" (*Sophist*

[23] In the colloquial Athenian language 'bastard' referred to a child whose father was a citizen of the Athens and mother an alien. Analogously, reason together with sensible observation begets 'bastard' accounts of phenomena.

[24] For Plato, only unchanging forms can be proper objects of clear and distinct knowledge, because each of them remains exactly the same in all respects, and each one is also distinctly different from any other. But in sensible phenomena sameness and difference appear as 'mixed' or 'divided'; a tree seems both the same and different compared to what it was twenty years ago. Our perceptual knowledge is thus unavoidably confused.

255d).[25] Thus all change presupposes receptivity, passive power, the source of which for Plato is space.

What is this all-receptive space? As an utmost contrast to the ideal forms, the space is under perpetual change, at every moment in a different state, lacking any kind of ordering principle.

> Because of being filled with powers [*dunameis*] that are neither similar nor evenly balanced, it is in no part in equilibrium but sways unevenly in all directions, shaken by the powers and, being set in motion by them, shakes them in turn.[26]

Space is the condition "one should expect anything to be in whenever god is absent" (53b). In other words, this is what would remain were the work of reason entirely eliminated from the cosmos—a state of complete disorder, containing only powers which cause changes without any rational control.[27] Plato calls these powers 'traces' of the fire, water, earth, and air (53b), referring to what these simple bodies would be without their characteristic geometrical forms, when they "lack reason and measure". The powers become manifest as the characteristic qualities of fire, air, water, and earth; fire has heating power, water power of making wet, etc. In virtue of these powers simple bodies, and bodies consisting of them, are able to affect each other and cause changes. And the powers *necessitate* these effects; fire necessarily warms and water necessarily makes wet. This is the ultimate source of the necessity (*anankê*) Plato speaks of as the other main factor besides reason in the generation of the cosmos (47e). The necessity inherent in the material bodies cannot be removed by the ordering power of reason, which explains the resistance the power of reason meets in bringing order into the sensible world.

On this interpretation, Plato reduces the cause of all changes in the causal interaction of bodies to the irregular motion of the four elementary powers of the space.[28] All changes among the four kinds of elementary bodies are due to them, and consequently also changes

---

[25] Also in *Sophist* 255d: "In fact we undoubtedly find that what is different is this by the necessity of something else and not by what it is."

[26] *Timaeus* 52e.

[27] In the *Statesman* a state entirely devoid of reason is described as a "limitless ocean of unlikeness" (273d).

[28] It should be noted that Plato takes the notion of change in a wide sense, including both qualitative change ('the stone becomes hot') and local motion ('the sun moves from the East to the West').

in complex bodies built up of these elements. As a result, the material world is in a state of "constant generation and perishing without any being" (28a), that is, without anything being or remaining the same. The basic constituents of bodies are changing into each other in a cyclical manner: water to air, air to fire, fire again to air, air to water, and water either again to air or to earth, stones and metals (49b–c).

But here a difficulty arises: when a simple body is transformed into another, what is the 'thing' that changes? When water is transformed into air and air into fire, what actually happens is that one kind of simple body (water) disappears and another kind (air) is generated, until this perishes and another (fire) turns up. What in this current of changes is water, and air, and fire?[29]

Plato offers the following explanation for this puzzle:

> Whenever we observe one of [the simple bodies] in different places at different times—fire for example—we should not speak of it, be it fire, as 'this' but as 'suchlike', nor of water as 'this' but always as 'suchlike', nor indicate any other of them, as though it possessed some stability, by using the terms 'this' and 'that' and supposing we are referring to a definite thing. For such a thing shuns and eludes the names 'this' and 'that' and every name which indicates that they would remain the same. Thus we must not speak of them as 'these', but in regard to each of them, and all together, we must apply the term 'suchlike' to represent what is always coming around; thus we shall call fire that which is repeatedly 'suchlike', and so with everything else that is generated. But in referring to that *in which* they appear and *from which* they in turn perish, and to that alone, we should use the terms 'this' and 'that'.[30]

According to this passage, what we observe as recurring in different places at different times are certain qualities which we mistakenly suppose to designate definite things. For example, fire appears as heat and yellow-red flaming, water as transparent liquid or moisture, etc., and we suppose that such particular appearances refer to a definite thing. This is a mistake, because the simple bodies are not like things that have permanence; they are just phases in a continuous transformational process. However, something *that* undergoes the transformations must

---

[29] "In regard to [the elementary bodies] it is hard to say which one we ought really to term water rather than fire, or which one we ought to term some one element rather than any and each of them" (49b). "Thus, since no one of these ever appear as the same, which of them can one definitely affirm to be just this, what ever it is, and not any other without embarrassment? There is none" (49d).

[30] *Timaeus* 49d–50a, emphases mine.

be supposed, but what is this 'that'? A common reading is that Plato alludes here to the receptacle.[31] Recall, however, that the receptacle or *chôra* is explained as an entirely formless pre-rational state incapable of producing anything observable. It simply cannot contain any kind of bodies. Thus that which appears to us as changing phenomena must be considered as a complex space consisting of the powers of *chôra* together with the power of reason, the latter forcing the former ones into determinate geometrical shapes. The simple bodies, appearing to us as certain qualities, should then be understood as transient states of this complex space—not as something separate from it but as its essential parts.[32]

On this picture, the source of all changes in the bodily world turns out to be the receptacle or space endowed with an inherent principle of disorderly motions.

The cosmos as material

Let us consider more closely Plato's explanation of the nature of material bodies. According to the basic idea of the *Timaeus*, the visible universe should be understood as a compound effect of reason and necessity.

> The generation of the cosmos was a result of the combination of necessity and reason. Prevailing over necessity, the reason persuaded the generated things for the most part to conduct toward what is best, and in this way, through necessity yielding to the rational persuasion, this universe was constructed in the beginning.[33]

In terms of my interpretation, what the reason determines are the formal structural properties as well as the teleological actions of living beings. By 'necessity' Plato refers here to the four kinds of causal powers of the space which, according to the passage, yield to the ordering power of reason, although reluctantly.[34] Without the work of reason there would exist just such aimless and imperceptible powers. The most elementary

---

[31] According to Johansen, the receptacle is described in the passage as that 'in which' the phenomenal bodies appear and perish; *Plato's Natural Philosophy*, p. 120.

[32] At *Timaeus* 52d–e Plato says rather explicitly that the receptacle, when "*being made* watery and fiery and *receiving the shape* of earth and air, […] takes on a variety of visible aspects" (emphases mine).

[33] *Timaeus* 48a.

[34] John Sallis remarks that the word *sustasis* used by Plato in the passage, translated here as 'combination', means that reason and necessity stand together "not only in the sense of their meeting, their joining together in a kind of union, but also in a sense

bodies are obtained by giving geometrical forms to the four kinds of powers of the space:

> It is plain I presume to everyone that fire and earth and water and air are bodies, and everything having the form of body has also depth. Moreover, depth is necessarily bounded by surface, and any surface bounded by straight lines is composed of triangles.[35]

By using two criteria—the simple bodies must be as beautiful as possible and capable of being transformed into each other by means of dissolution and recombination—Plato arrives at four geometrical shapes: the tetrahedron for fire, the octahedron for air, the icosahedron for water, and the cube for earth. The sizes of the elementary triangles may vary so that there is a great variety of each kind of the simple bodies, for instance water may appear as various kinds of liquids but also as metals, and by combining different simple bodies the ordering power may construct an unlimited variety of complex bodies (58d).

Should we understand the geometrical configurations of simple bodies as their ideal forms? I think we should.[36] Plato certainly holds fire, water, air, and earth to have forms which "are just in themselves" (51b).[37] The creation of the geometrical forms is presented in the *Timaeus* as the first step in the Demiurge's project of creating rational order into the space in accordance with ideal paradigms. Hence also the simple bodies should be understood as images of certain paradigms which are forced by the power of reason into the receptive space, as Plato actually asserts in the *Timaeus*.[38] However, because the power of reason is limited with respect to the powers of the space, the actual forms of simple bodies should be expected to fall short of the perfection and stability of their ideal forms.[39]

---

involving hostility, as when two soldiers stand together face to face in battle, in close combat with one another" (*Chorology*, p. 93).

[35] *Timaeus* 53c.

[36] *Contra* e.g. Cornford (*Plato's Cosmology*, p. 190) and Vlastos (*Platonic Studies*, p. 108, n. 86).

[37] The argument for the existence of their ideal forms is given in *Timaeus* 51b–52a. Cf. Cornford, *Plato's Cosmology*, p. 191.

[38] At *Timaeus* 51b the receptacle is said to appear "as earth or air in so far as it receives the imitations [*mimemata*] of these".

[39] Cornford remarks that the actual shapes of simple (or as he says, primary) bodies can only be imperfect copies of the perfect types "belonging to the intelligible world of mathematics"; *Plato's Cosmology*, p. 210. According to Cornford, however, the perfect

On the lowest level of the formation of the bodily world, that is, in causal interactions taking place between simple bodies, the power of reason is quite weak in comparison to the dominant powers of the space. Due to this, the actual forms of these bodies are extremely unstable. The constant transformation between them means that some bodies will lose their form in the interaction and disappear, and new bodies appear, when the elementary triangles—of which all the simple bodies are constituted—are recombined into new patterns (56e–57b).[40] The important point here is that all such transformations occur according to a purely 'mechanistic', non-rational principle: each simple body tends to move by blind necessity towards its like and affects only what is unlike it (56e–57a). I take this to mean that the dynamic character of the interactions in the space is not due to the geometrical forms of simple bodies, and thus not on the power of reason, but depends entirely on the elementary powers of the *chôra* harnessed in such forms; fire does not burn or turn water into steam in virtue of its structural form and the rational power endeavouring to maintain this form, but in virtue of the blind 'necessary' power of fire, the elementary fire-*dunamis* forced into the form of tetrahedron.[41]

---

geometrical shapes cannot be identified with the ideal forms of these bodies (p. 190). Why not, remains unclear.

[40] As noted in the previous section, transformations of simple bodies should be strictly speaking understood as changes in the states or regions of the complex space consisting of both the powers of *chôra* and the power of reason. One way, perhaps the best one, of understanding this is to give this space a 'field metaphysical' interpretation: it can be considered as a unified field of randomly occurring elementary powers where certain kinds of homogeneous regions are formed by the power of reason. Each particular simple body is really a region having (more or less approximately) a certain geometrical shape in this field. For example, a particle of fire is a pyramid-like region in the space where fire-*dunamis* (the power of fire) occurs; the state of the space is 'fiery' at this region. The important point of the field interpretation is that bodies cannot be said to exist apart from the space, like balls in a container. In speaking of particular objects we refer to different states of the space: it is the space that is, or appears to us as, fiery or watery or the like, as Plato remarks at *Timaeus* 51b and 52d–e. The idea of field metaphysic has been suggested by Jonathan Bennett for interpreting Spinoza's view of the nature of extension (*A Study of Spinoza*'s Ethics, pp. 88–106). For an elaboration of Bennett's idea of field metaphysic, see Valtteri Viljanen's "Field Metaphysic, Power, and Individuation in Spinoza". Cf. also Viljanen's essay on Schopenhauer in this book.

[41] This is also Cornford's view. "The motion [of primary bodies] is attributed to the qualities or powers of the primary bodies—those 'vestiges of their own nature' which they possess in abstraction from their geometrical shapes", he writes in *Plato's Metaphysics* (p. 228).

The case is the same with complex bodies, too. The causal power they possess comes from the simple bodies of which they are composed, and their actions have therefore only 'blind' causal consequences. A fire in the oven makes the stones hot by an aimless necessity. The heat in the stones is a 'passion', something not produced actively by anything that belongs to the nature of the stones but by the external power of fire. There is nothing teleological in this interaction; the fire has no intention or purpose to heat the stones but what it accomplishes, its 'action', is necessitated by its material nature alone—in contrast to a person who intentionally puts fire in the oven to make the stones hot for baking. According to Plato, material bodies, when devoid of soul, never have active power needed for intentional action but always work under necessary causation. However, in the ordered universe this necessity is subordinated by the divine reason to its rational purpose of accomplishing "as completely as he can the form of what is the best" (46c). Bodily powers of space, when used as auxiliary causes by the Demiurge, "accomplish what is beautiful and good", but without reason they will produce only random and disorderly effects (46e).[42]

Now, how does the divine reason use the blind powers of the receptacle as auxiliary causes for its good ends? In two ways, I will claim. First, through the organization of simple bodies into complex structures according to the models in the realm of ideal forms. To serve the ends of reason, the structure of bodies, from the simplest to the most complex ones, should meet the standards of harmonious proportions as perfectly as possible. The body of each living being forms an organized, well-functioning whole, and the organizing principle here, like everywhere, is nothing but the power of the reason.[43] Because it is through the soul that the divine reason can make the cosmos as perfect as possible, the body and the soul of living beings must form a whole with well-organized interaction between them. This renders the power of reason another effective way to realize its aims: by controlling and directing through the soul the behaviour of living beings.

How is this kind of control possible? How can souls interact with bodies? How does Plato conceive the souls of living beings?

---

[42] See Johansen's *Plato's Natural Philosophy*, chapter 5, for an illuminating discussion about the nature and role of auxiliary, or, as he names them, contributory causes in Plato.

[43] This becomes evident from Plato's account of the structures and functions of human bodily organs in *Timaeus* 61c–69a.

The soul of the cosmos

According to the famous passage 35a of the *Timaeus*, the soul of the cosmos, the world-soul, is generated from three main ingredients.[44] The first of them is a special kind of 'being' or essence (*ousia*) compounded of "the being that is always in itself and the being divisible in the generated bodies." The second main ingredient consists of 'sameness' resulting from a similar compounding of the indivisible and divisible kinds of sameness, and the third one, a special kind of 'difference', comes out of blending correspondingly the indivisible and divisible kinds of difference. The soul is thus a combination of special kinds of 'being', 'sameness' and 'difference'. My dynamic approach suggests the following interpretation of this extremely condensed and enigmatic passage.

Notice first that the world-soul is an essential part of the cosmos, not outside or above it. It must therefore be understood as a result of the combination of necessity and reason like anything else in the generated universe. I have considered above how this combination should be conceived in the case of bodies: the power of reason gives bodies, as their actual essence, a more or less permanent identity, and by the necessary powers inherent in their basic constituents they are exposed to perpetual changes. My suggestion is that also the generation of the soul is to be understood as a combination of these two kinds of powers. However, certain characteristic differences between these two ways of combining reason and necessity should be noted.

First and foremost, the world-soul is dominated to a much higher degree by the power of reason than the world-body, as Plato's description of its main ingredients indicates. The 'being' of the soul is said to take place between the unchanging being and the changing being divisible in bodies; accordingly, it has less power of being in itself than the unchanging ideal forms but more than the actual bodies. This is what should be expected, for to exercise rational control over the body by directing its motions, the embodied soul must be endowed with more power of reason than what would be needed merely to maintain the actual form of the body. On the other hand, it cannot remain immutable like the ideal forms but must itself be in motion and thereby subordinated to

[44] I follow here the Proclus-Cornford interpretation of this much debated passage; see Cornford, *Plato's Cosmology*, pp. 59–66.

change, for all motion involves change.[45] In virtue of having a great amount of rational power, the soul is capable of maintaining its identity, its sameness, to a much higher degree than the body, but, unlike the immutable forms, it is moving and alters in certain respects from time to time. The soul must therefore possess also receptive power, for according to Plato, nothing can change without receptive power. The forms lack all receptivity, they never receive anything from the outside but are always fully in themselves. The only way of applying the notion of difference to the forms is to say that each of them is entirely different from all other forms. They are in this sense 'indivisibly' different, different from each other but in no respect different from what they are in themselves. In contrast, the difference in generated bodies is 'divisible', for the state of one and the same body is changing from one time to another. Now, according to the *Timaeus* passage, these two kinds of difference are compounded in the world-soul in such a way that the soul takes its place between them. It has thus passive receptive power but much less than material bodies have.

This kind of interpretation seems to be in agreement with Plato's description of the movements of the embodied world-soul in *Timaeus* 36c–37c. According to the passage, the soul revolves, in virtue of the power of reason, evenly in circular paths, since such motions reflect best the reason's endeavours.[46] However, the circular movements of the soul are divided into two kinds. Those revolving along what Plato calls 'the circle of the same' represent the activities of reason at the purest in the cosmos. Because of this, the circle of the same is given a dominant position with respect to those movements of the soul that travel to the direction contrary to the circle of the same, and some of them at differing speeds, so that the states of the world-soul as a whole vary. These are the seven 'circles of the different' (36c–e). The deviations from the uniform paths must be seen as indications of some power external to the power of reason.[47] Indeed, according to Plato, the world-soul is in

[45] For Plato the soul, because of having reason and being capable of moving, has life. The Eleatic Stranger remarks how senseless it is to think of soul without reason and life, and of life as something completely changeless (*Sophist* 248e–249a).

[46] Similarly, in the *Laws* Plato asserts that motions which best represent the activity of reason are regular and uniform motions that rotate around a fixed centre and proceed according to a systematic rule (*Laws* 898a–b).

[47] In the *Statesman* the Visitor teaches to the Young Socrates that a reverse rotation in a circle is the smallest possible change with respect to the movement of the same (269e).

contact with the generated sensible world through the circles of the different, and such contacts give rise to true beliefs in the soul about the changing phenomena (36a–b). The generation of such beliefs would not be possible if the soul did not possess any receptive power.

Plato speaks of the soul as if it were something really moving in space, and thus extended. How could it, an immaterial thinking being, be conceived as extended and moving? If we think of the soul in terms of power, we may find a plausible explanation. Considered as consisting of powers, the soul can be claimed to be invisible but still capable of manifesting itself as circular motions of visible bodies.[48] The soul exists in the cosmos as embodied and its power becomes manifest to us through the bodies of living beings. By the power of reason the world-soul determines the celestial bodies to move along circular paths, and where this power is at the greatest compared to the 'irrational' power of the soul, the bodies (the fixed stars) are moving along the circle of the same, and where the passive power of the soul has more influence, the bodies (the seven planets) revolve along the circles of the different.[49] Thus, in holding the soul to be moving Plato need not mean that it is extended in the sense bodies are, even though his description in 34b and 36e of how the Demiurge stretched the soul throughout the world-body from centre to outer surface may seem to imply that. His idea is simply that the world-soul and its body are coextensional in the sense that the soul's active and passive powers, though imperceptible as such, come to be observable as certain rational (i.e. circular) movements in the bodily parts of the cosmos.

It should be noted that the soul, being composed of both active and passive powers, is not homogeneous throughout: its degree of rationality, the proportion of the two kinds of powers, varies considerably between different parts of the cosmos.[50] Accordingly, some living beings

---

[48] The world-soul itself is invisible but expresses itself in the motions of visible bodies (*Timaeus* 36e).

[49] Cornford, referring to Plato's association of the movements of the planets with the 'wandering cause' in *Timaeus* 40b, conjectures that "the possibility remains that the World-Soul is not wholly rational" (Plato's *Cosmology*, p. 76).

[50] Johansen has arrived at the same conclusion. According to him, there was "a certain structural and functional differentiation within the soul even if the different circles moved in perfect mutual harmony", so that the embodiment of the soul just brings out the potential irrationality inherent in the soul's original composition (*Plato's Natural Philosophy*, pp. 158–159). Johansen uses this observation to enlighten Plato's division within the human soul between more or less rational parts, but the point applies to the individual parts of the world-soul as well.

are by nature more liable to the irrational bodily powers than others. For example, human souls are claimed to be composed of ingredients of "a second and third grade of purity" (41d), which indicates that they contain a great amount of passive power so that their proper movements can easily be distorted by bodily causes. The grade of purity is highest in the souls of the fixed stars that move along the circle of the same, after them come the souls of the planets revolving around the circles of the different, and then human souls endowed with reflective reason. After human souls come the souls of animals with descending degrees of rational power appearing as the capability of self-regulating movements and sensation, though not of reflective reasoning. The souls of plants are located at the lowest level in this hierarchy.

Human mind and body

If we consider the cosmos as a whole, the active power of reason appears in it in two ways. First, it gives to the body of the world its proper structure, the spherical shape, for "of all bodily forms this one is the most perfect and the most similar to itself" (33b), most akin to the perfect beauty and immutability of its ideal model. The world-body was also made all-inclusive: no power was left outside it, and because of lacking opposing power from the outside, it became indestructible. All changes in the world-body occur in the parts leaving the whole intact. Second, as the active power forms the essential part of the soul of the cosmos, it makes the world-body move uniformly around its axis. In this way the Platonic cosmos is a self-sufficient living being, able to exist and act entirely "by itself and within itself" (33c), following the immutable laws of its own rational essence alone.

In contrast, the living beings of which the cosmos is composed are constantly changing, both in mental and bodily respects.[51] They are as many and of as great a variety as the infinite reason can conceive to be contained in the ideal living being, for otherwise the cosmos would fall short of resembling its model (39e). As Plato's division of actual living beings into six main kinds (stars, humans, three kinds of animals, plants) indicates, the variety consists of beings of different amount of

[51] Except the fixed stars which, like the cosmos as a whole, have a spherical form and are rotating evenly on their own axes. They are located on the outer surface of the world-body and move along the circle of the same (40a), all parts being held together with indissoluble bonds (43a). They are thus, like the world-body, indestructible.

rationality, presumably of all possible degrees, including also the variety falling within species.[52] To what extent the living beings are liable to suffer changes in causal interactions with each other depends on their degree of rationality, a high amount of active power equalling low receptivity to external influences, and vice versa, both in bodily and mental respects.

Let us see what this means in the case of human beings. The human soul is, Plato explains, compounded of the same but 'less pure' ingredients as the world-soul (41d). On the understanding that 'less pure' means less active power in proportion to passive power, human souls can be said to have less power of being in themselves than the world-soul and therefore more liable to be affected externally. Still, an essential part of the human soul consists of the power of reason which provides it with the ability to move along circular paths of the same and the different, like the world-soul does, and to thereby achieve true knowledge of the immutable world of forms as well as of changing empirical phenomena.[53] However, being endowed with a weaker power of thinking than the world-soul and set to exercise its power under external constraints of which the world-power is entirely free, the human soul's search for truth requires constant effort. We might say that a constant *striving* to true knowledge is implanted in the human soul.

Being embodied, human souls cannot avoid suffering different kinds of passions:

> When the souls have of necessity been implanted in bodies where things are always coming in and passing out, there are necessarily generated for all of them, first, sense perception arising out of forceful affections, second, desire mingled with pleasure and pain, and besides these, fear and anger and emotions associated with them as well as all emotions contrary by nature to them.[54]

---

[52] I have argued elsewhere that for Plato the sensible world is a plenitude of living beings of all possible degrees of rationality, when rationality is understood as self-regulating power. In addition to interspecies variation, Plato assumes great differences between individual members of one and the same species, so great indeed that interspecies borders may become exceeded. For example, he claims the least rational and ignorant humans to belong to the level of the lowest water animals (91d–92b); on the other hand, he holds that it is possible for members of a lower animal species to reach the level of rationality of a higher species, even of an average human level, as his doctrine of interspecies transformation in *Timaeus* 90e–92c implies. See my "Plato on Diversity and Stability in Nature", pp. 90–91.

[53] As *Timaeus* 43d implies.

[54] *Timaeus* 42a–b.

According to Plato's explanation here, passions such as sense perceptions, desires, and emotions arise in the soul because of changes in the body, and this is what happens necessarily. What is this necessity?[55] And how can material, sensible bodies affect souls which are by nature immaterial?

Obviously, Plato refers here to the same necessity by which bodies affect each other when they exert their inherent causal powers. Having similar passive power as bodies, human souls are receptive to the bodily causal powers in the same way as bodies themselves. Plato does not use the notions of active and passive powers of human soul but speaks of the circle of the same and the circle of the different divided into seven sub-circles, like in the case of the world-soul, and of changes in these motions due to the receptivity of soul to bodily passions. Circular motion represents the activity of reason, and with decreasing active power and increasing passive power the tracks of motions draw farther from circular shape, until at the other end no regularity prevails in them. An entirely irrational motion means, for Plato, random wandering up and down, forwards and backwards, to right and to left. This is how material bodies move in the absence of rational power to control them (43b).

The circle of the same manifests at the purest the power of reason to be and act entirely by itself, but the circles of the different are less able to control their own rotation, representing thus mental activities liable to external influence.[56] In the absence of such influence, the circle of the same exercises perfect control over the revolutions of the different, preventing changes in them. However, as it is necessarily embodied, the human soul cannot avoid being affected by the power of bodily causes, and this fact brings it to a dangerous situation:

> [The lesser gods] confined the revolutions of the immortal soul within the bodies subject to inflow and outflow.[57] These revolutions, being thus

[55] Actually two different notions of necessity appear in the passage. The first one is related to embodiment and is entirely due to the active power of reason: to bring as perfect order as possible to the cosmos, it must work through embodied souls. For a useful discussion of the two kinds of necessity, see Johansen's *Plato's Natural Philosophy*, pp. 145–146.

[56] Cf. Johansen: "The soul has a potential for irrationality since it is internally structured in a way that allows some of its motions to lose their circular shape in certain circumstances" (*Plato's Natural Philosophy*, p. 144).

[57] According to Plato's mythological presentation, the creation of mortal living beings was left by the Demiurge to the lesser gods who fulfilled the task *by imitating*

> bound within a mighty river, neither mastered it nor were mastered but forcefully tossed it and were tossed by it, so that the whole living being was moved but proceeded in a random way disorderly and unreasonably, admitting of all the six motions: for it would move forwards and backwards, to right and to left, upwards and downwards, wandering every way in all six directions.[58]

As this passage reveals, Plato thought of all human souls as rational by nature: they always tend to move in perfect circles. However, the embodied soul is perpetually exposed to the powers causing 'irrational' movements in the body, and this may turn out to be fatal to the whole project of the divine reason: when exercising their entire force, the bodily powers may take over the power of reason and block the course of the same with the consequence that the circles of the different, lacking the co-ordination of the same, begin to move irrationally, "sometimes reversed, sometimes oblique, sometimes upside down" (43d). But if so, how then can our soul work for the good aims of reason?

Plato's answer can be found in his account of the teleological structure of human body and in his way of adapting the functions of the soul into this structure.[59] He claims that the human soul is located in three separate parts of the body according to the degree of passivity varying in the heterogeneous soul 'stuff', the purpose being apparently to ensure that the inherent tendencies of the soul find a proper outlet: active thinking for the most rational part; passive sensations, feelings and desires for the most receptive part; and mediation between reason and desires for the executive part of middle-way rationality.[60] When

---

the power of the Demiurge (41c, 42e). Thus also the 'mortal' parts of the cosmos, the living individuals of finite duration, can be understood as manifestations of the universal active power of reason, though possessing less of it than the 'immortal' cosmos as a whole.

[58] *Timaeus* 43a–b. The primitive powers of fire, air, water, and earth cause them to 'wander' without end in rectilinear motions to all possible directions. Being composed of such basic elements, human bodies are necessarily involved in the interaction between material entities and exposed to such irrational motions. For instance, through interaction some power of fire may be transmitted from an external object to a human body causing there 'irrational' movements which, affecting further the movements of the soul, generate a sensation of heat.

[59] I owe this point to Johansen; he develops it at length in *Plato's Natural Philosophy*, pp. 148–152. Plato gives a detailed account of the structure of the human body and functions of the soul fitting to it in *Timaeus* 69c–72d.

[60] The spherical head, providing space for circular movements of the same, accords best with the activities of human reason; the part between the head and the midriff (the heart and the lungs) serves the executive functions of the soul; and the area beneath

each part is practicing its proper function, without intervention from other parts, harmonious order will be ensured in the soul, and this is also, according to Plato, the best guarantee of bodily health, for the body by itself easily gets out of balance and is thereby liable to suffer from diseases and degenerations (82b). Working in cooperation with reason, the executive part of the soul can help the body to keep its natural equilibrium, for instance by moderating excessive bodily appetites. Therefore, Plato says, "with respect to health and disease, virtue and vice, no proportion or lack of it is more important than that between soul and body" (87c–d).

In this way, through fitting the soul with its inherent tendencies to the tripartite structure of the body, the irrational powers are subjected to the rational ends of the Demiurge. As long as the harmony in the soul prevails, the sensations, emotions, desires and other passions of the soul generated by bodily causes serve rational purpose, the well-being of individuals, even the most forceful and potentially disrupting ones like appetites for food and drink which can easily grow in excess (73e). The passions of the soul are important indicators of harmful disturbances and diseases in the body. In Plato's view, mental diseases are always the outcome of disorders in the body; they are thus based on the passive power of the soul. The soul can never *actively* cause any mental disturbances, for the power of reason strives by its nature to generate a proportional balance between the different functions in the soul and to maintain the balance. In this striving, it needs the help of the body, and when the soul and the body are made commensurate, a living being resembles most its ideal model.[61]

With the help of this idea of 'natural condition', Plato defines the passions of pleasure and pain:

> We should understand pleasure and pain as follows. A strong and sudden affection which is against our natural condition is painful, whereas a similar return back to the natural condition is pleasant.[62]

---

the midriff (the liver, the belly, and the spleen) provides a seat for the most violent passions in the human soul.

[61] Cf. *Timaeus* 87c–d: "With respect to health and disease, virtue and vice, no proportion or lack of it is more important than that between soul and body."

[62] *Timaeus* 64d. Compare *Philebus* 31d: "I say that when harmony in living beings is broken up, a disruption of nature and a generation of pain also take place at the same time. But if harmony is regained and the nature restored, we say that pleasure is generated."

Recalling that it is the power of reason which keeps living beings in their natural condition, we may state that in Plato's view pleasure amounts to an increase and pain to a decrease of the active power. This kind of pleasure is always good for us, for it equals increasing capacity to active, self-directing life; we can never have too much active power.[63] This power will grow even greater when the soul after the death of the body is released from its bonds and "flies out joyfully as free according to its nature" (81d). We might call this kind of pleasure 'joy' in distinction from the bodily pleasure which, according to Plato, can be extremely harmful. "We must maintain that [bodily] pleasures and pains in excess are the greatest of the soul's diseases" (86b). Instead of increasing active power like joy does, excessive bodily pleasures prevent us "from seeing and hearing anything right" and make us "least capable of exercising reason" (86c).[64]

To summarize: the embodied human soul maintains its natural condition as far as its parts do their proper job under the control of reason, or, as Plato puts it, the circle of the same coordinates the movements of the circles of the different. Because of being embodied, a human soul must necessarily suffer passions which always arise from affections caused in the body by external material powers, that is, by the powers of the space (*chôra*). Some of the affections—the passions of pain—are negative in the sense of reducing temporarily the extent to which the active power of reason is able to work, while some are positive and increase the free activity of reason. The important function of the passions is that they serve as indicators of the condition of the body, informing the soul of beneficial and harmful processes in the body. Moreover, we would not be able to orient in the sensible world without perceptions which

[63] Essentially the same account of pleasure and pain can be found in later rationalists, e.g. in Spinoza. The passion of pleasure, or joy (*laetitia*), is defined in Spinoza's *Ethics* as a man's passage from a lesser to a greater perfection, and pain, or sadness (*tristitia*), as a passage from a greater to a lesser perfection (*Ethics*, part III, definitions 2 and 3 of the affections). Passage to a greater perfection means an increase and passage to a lesser perfection a decrease in the active power forming the essence of individuals. And whatever increases this power is good, Spinoza argues (*Ethics*, part IV, demonstration of the proposition 8).

[64] It should be noted that the active power does not become irreversibly destroyed by excessive pleasure and pain nor by any kinds of passions, but only temporarily weakened for the time the external pressure causing the passions lasts. When the strong 'bodily streams' are diminished, the circle of the same acquires again its controlling position and the revolutions of the different will turn towards their natural course (44b).

themselves are passions of the soul. However, it is important that our beliefs based on perceptions are trustworthy, and this is best ensured by a proper cooperation of the soul and body.

Cosmos as the object of belief and knowledge

Undoubtedly the most familiar doctrine of Plato's epistemology is the distinction between knowledge (*epistêmê*) and belief (*doxa*). Its most detailed exposition can be found at the end of *Republic* 5 where knowledge and belief are explained as essentially different kinds of power (*dunamis*). Knowledge, "the strongest of all powers", is said to be directed to what purely is (478a, 479d) and to effect infallible truths in us (477e). Knowledge refers thus to the power of thinking in virtue of which human souls, as well as the world-soul, become acquainted with what purely is, that is, with what is capable of being entirely in itself. In the *Timaeus*, the capacity of grasping things which are entirely in themselves is identified with reason (51d). Now, Plato undoubtedly refers here to the ideal forms as the objects of knowledge, but this need not imply the impossibility of knowing anything about the sensible world. On the contrary, to the extent actual living beings, as more or less stable images of their ideal forms, have power to preserve their formal structures and characteristic functions and thus to persevere 'in their being', also they can be natural objects of genuine knowledge.

Belief, in turn, is characterized in the *Republic* as a power directed to things which are wandering intermediately between what purely is and what entirely lacks being (478d, 479d); what it accomplishes in us are changeable and usually mistaken beliefs (477e). In the *Timaeus* beliefs are associated with sense-perception. The objects of belief, we read, are "all things we perceive by our bodily senses" (51d). In another passage the generation of perceptions is explained as follows:

> When [a bodily organ] that is by nature easily moved is influenced by even a minor affection, it transmits this all round, one particle affecting others in the same way, until the affection reaches the mind and reports the power of the agent.[65]

The power of the agent refers to one or more elementary powers inherent in material bodies. The rectilinear movements it generates in

[65] *Timaeus* 64b.

material objects cause movements in sense organs endowed with similar powers, and these movements in turn affect those parts of the body where the body and the soul are interacting with each other. The power of an external object, transmitted in this way through the body to the soul, is experienced as sense perception. As discussed above, rectilinear bodily movements cause in the soul passions of various intensity by affecting the movements of the circles of the different.

Thus in all sense-perception, like in experiencing any other kind of passions, the passive power of the soul is at work. If we limit perception to what arises immediately in the soul through a particular sense organ, passive receptivity is all what Plato assumes to be involved. This passive power, the capacity of perceiving colours, sounds, smells, tastes, hardness, and softness, is common to humans and beasts right from birth, he says in the *Theaetetus* (186b). However, Plato's explanation is in an important way different in the case of perceiving complex objects like material bodies and behaviour of living beings. To perceive a bird or a lyre, say, passive power is not enough but also active working of the soul is needed: a vast amount of perceptual impressions must be brought into an organized whole, which requires comparison of present and past impressions so that the common features which make an object a bird or a lyre can be found. Plato argues, interestingly, that in looking for features common to different sense impressions, the soul functions by itself (*autê di' hautês*), by its own active power (*Theaetetus* 185d–e).[66] This use of the active power of the soul is characterized as 'forming beliefs' (*doxazein*) (187a), that is, forming general conceptions of the different kinds of observable objects and events with which the sensible world seems to be filled up. It does not, however, yield knowledge in Plato's strict sense because of being occupied purely with sensible material. The question is just of observational generalizations.[67]

Plato repeatedly points out how perceptual beliefs are strongly context-dependent. A girl judged as beautiful among other girls appears ugly in comparison with gods (*Hippias Major* 289b), and truth-telling seems just in some circumstances but not in others (*Republic* 331c–d).

---

[66] According to *Theaetetus* 185c, it is indeed a power (*dunamis*) that reveals to the soul what is common to different sense impressions.

[67] The final conclusion of the discussion on knowledge as perception in the *Theaetetus* is that neither the elementary perceptions nor forming general judgments on their basis, however true and however well reasoned, provide us with knowledge in the proper sense (210a–b).

Our senses give contradictory reports of material objects and the behaviour of people due to the fact that what we perceive as something (hot, cold, heavy, beautiful, just, good etc.) is dependent on the presence of or comparison with other things. It is therefore impossible to come to know what the objects of perception in themselves are, apart from their relation to other things, by comparing sense data, regardless of the commonality of the features found in this way. Purely perceptual information always falls short of knowledge. To obtain true knowledge we should become acquainted with the work of reason in the cosmos, that is, with the actual forms or essences of things and the principles according to which living beings are moved by the rational soul.[68] How can we succeed in this?

This is what Plato suggests in the *Timaeus* (68e):

> We must distinguish two kinds of cause, the necessary and the divine; the divine we have to search for in all things for the sake of gaining a life of happiness to the extent that our nature admits, and the necessary for the sake of the divine, reckoning that without the necessary it is impossible to discern the divine objects themselves which we seriously study, and to apprehend them or in any way share in them.

By the divine cause Plato of course refers to the power of reason in virtue of which the Demiurge has brought about all what is good in the generated world, that is, the rational order reflected by the complex structures of living beings and their functioning as integrated parts of the whole cosmos. The interesting claim here is that the nature of this order cannot be apprehended without necessary causes, which Plato associates with the material world and sense perception. How can they be of help in looking for the work of reason in the universe?

According to Plato's account, the Demiurge took over the necessity inherent in the material realm and made it to serve the generation of the ordered cosmos (68e). The necessary causes are forced to work for the good aims of reason. Seeing this is a decisive step towards a genuine knowledge of the actual universe, for then one becomes interested in looking for intelligible structures and regular patterns in observable phenomena instead of making generalizations on the basis of sense

---

[68] "By perception we cannot apprehend truth, since we cannot apprehend by it the essence [*ousia*]" (*Theaetetus* 186e). By *ousia* Plato presumably refers here to the essence or being of ideal forms, but, in view of the present interpretation, also actual living beings as images of their ideal forms have a more or less permanent essence.

impressions. Human souls, being endowed with power of reason, are able to recognize such structures and patterns and give them exact formulations. Paradigmatically, the revolutions of the planets serve as visible evidence of the lawlike motions of the world-soul. They inspire our reason to give mathematical formulations to the laws and make hypotheses about more general rational principles behind the laws. In this way, through sense perceptions, the soul will find right ways in tracing the immutable order of the ideal forms, although the most demanding work must be done by the innate rational capacity of the soul.[69] However, because the rational power always appears as blended with blind necessary causes in the observable phenomena, it is not easy to attain correct accounts of its principles. Moreover, the latter kind of causes tend to prevent our intellectual endeavours by generating disturbing passions in us. Only by careful observations of the circulations of the celestial bodies and by mathematical calculations concerning them we come to learn more and more about the nature of the immutable order imperfectly realized in the cosmos (47b–c). Similarly, listening to music, if guided "by reason and not by desire for pleasure", leads us to understand the nature and importance of harmony in the cosmos (47d). Seeing sensibles as images of ideal forms, we are able, by our power of reason, to formulate hypotheses about the latter, to account for these hypotheses by higher principles and to proceed in this way until we ideally "come to something adequate" (*Phaedo* 101e), that is, come to understand the beautiful order of forms and, ultimately, the unhypothetical first principle which is the perfect harmony of the good

[69] Cf. Johansen's conclusion about the role of perception in Plato's cosmology: "The intellect works from its own resources on the perceptual input, analyzing and interpreting it through mathematical computation" (*Plato's Natural Philosophy*, pp. 175–176). Perception, he says, has a crucial causal role in triggering this process. This is true if 'causal' is taken in a very broad sense. Plato himself, although assuming interaction between sensible affections and the rational faculty (i.e. between the circles of the different and the same) of the soul, leaves the nature of this interaction entirely unspecified. The idea of forming conceptions of the unchangeable forms by 'recollection' from "seeing or touching or some other sense perception" (*Phaedo* 74e–75a) is more confusing than clarifying, as Johansen remarks. However, it is interesting to note how Plato uses the notion of striving in this connection: what we perceive through senses is the *striving* of things to reach their ideal form of which they necessarily fall short (*Phaedo* 75b). As remarked above (n. 15), the power of reason appears in the cosmos as a kind of striving of perceptible things towards a rational order, and perceiving such strivings may somehow directly lead our active power of thinking to formulate hypotheses about this order.

itself.[70] The search for truth is not only intellectually but also morally rewarding: by acquiring knowledge of the cosmic order our soul as a whole becomes able to have a similar order and harmony (47b–d).

According to Plato's view, then, the clue to the rational order of the universe lies in our perceptions, in what we see and hear and touch, or even smell and taste. For this reason the real nature of things can be easily confused with particular perceptual qualities—a pot is found beautiful because of its bright colour or a fighter brave because of never retreating. Even when we learn to find regular patterns, our knowledge of the generated world will remain more or less inadequate because of the constant interplay between the ordering power of reason and the power of material necessity. The world-soul alone is able to discern exactly the work of divine reason in the cosmos, acquiring thus genuine knowledge. It alone also perceives correctly all changes there, possessing thereby firm and true beliefs of the sensible phenomena (*Timaeus* 37a–c). Nevertheless, in spite of the shortcomings of human intellectual power, the search for rational causes is our primary mission:

> The lover of reason and knowledge must pursue as primary those causes which belong to the intelligent nature, and as secondary all those belonging to things which are necessarily moved by others and which in turn set others in motion. We also must do likewise: we must declare both kinds of causes, but keep distinct those which, working with reason, produce what is beautiful and good, and all those which, being devoid of reason, produce always random and disorderly effects.[71]

To what extent we learn to know the immutable principles according to which the cosmos is ordered depends on the free use of our active power

---

[70] The famous simile of the divided line of *Republic* 6 makes a distinction between four epistemic stages that consist of two sorts of belief and two sorts of knowledge. My general interpretation of the simile is as follows. The lowest stage consists of 'images' (*eikonas*) or 'shadows' of material objects (509e); it seems appropriate to take them to refer to passively received sense impressions. At the next stage comes 'reliable belief' (*pistis*) that is concerned with the ordinary bodily objects (animals, plants, artefacts etc.) causing sense impressions (510a); such beliefs require active synthesis of different sense impressions. The two sorts of knowledge are 'thinking' (*dianoia*) and 'reasoning' (*noêsis*); the former may be taken to refer to hypotheses about the rational order on the basis of observational regularities (511a), and the latter to the ability of reason to grasp the intelligible order entirely by itself, without making use of anything sensible (511b). Ascension from lower to higher epistemic stages requires thus increasing power of active thinking.

[71] *Timaeus* 46d–e.

of thinking. We should therefore train with special care this power so that it will lead us to what is the most beautiful and best (89d).

What is important is the *free exercise* of the active power of the soul. To promote this as much as possible, the training should take into account all three parts of the soul and their relation to body; in seeking rational life, human individuals must be considered as living beings composed of soul and body, Plato reminds (*Timaeus* 89d). Through careful physical and mental training each part of the soul can be made to function properly in relation to each other, which best ensures the working of human reason free from external influence—"the best motion caused by oneself in oneself" (89a). And to achieve supreme happiness, we should use our free active power "to the love of learning and to true wisdom" (90c).

It is here, in the exercise of active thinking, where the true human freedom is found. Plato's paradigm for a free man is the philosopher who through reason seeks for eternal truths, "the idea of being" (*Sophist* 254a), without being determined by anything else than his active power of thinking.[72] And because true knowledge means eternal truths, to the extent we achieve it we also reach immortality.

> But if someone has seriously devoted to the love of learning and to true wisdom and has exercised that part of himself above all, then there is absolutely no way that his thoughts can fail to be immortal and divine, if he shall lay hold upon truth, nor can he fail to possess immortality to the extent that human nature admits.[73]

Interestingly enough, human immortality is a matter of degree for Plato: the more we have adequate knowledge, the greater part of us will be immortal. And because the achieving of true knowledge depends on our power of thinking, the extent to which we are immortal is related to the amount of the *free* active power we have at our disposal. Immortality must be earned by intentionally improving active thinking, on the

---

[72] According to *Theaetetus* 172c–d, a free man has plenty of time to develop in peace arguments "to attain that which is" without external pressure, in contrast to orators in the law courts who always speak in a hurry, under the compulsion of the suit. In the *Sophist*, the philosopher as a free man is contrasted with the sophist who "runs into the darkness of non-being" (254a), that is, to the changing sense experiences, being thus constantly influenced by the power of material necessary causes. The condition of a free man is the autonomous use of reason, whereas a slavish mind is subject to what his senses suggest. Cf. Vlastos, *Platonic Studies*, p. 148.

[73] *Timaeus* 90b.

one hand by fighting against bodily passions which tend to restrict the free use of reason, and on the other hand by investigating regularities which reveal to us the beauty and harmony of the divine reason. The aim of these efforts is to bring into the embodied soul similar harmony as prevails ideally in the realm of forms, which is the best guarantee of free active thinking and thus also of immutable knowledge and immortality.[74]

[74] See *Timaeus* 90c–d. The free use of reason remains necessarily limited during the embodiment of soul, in spite of all the efforts to enhance it. What happens after the death? In the *Phaedo* Plato argues that then the soul, being entirely 'in itself' apart from the body, attains pure knowledge and thus full freedom and immortality (67a). If so, why then should we strive in this life to attain a good life hereafter? Here we should note that if only that part of our embodied soul is immortal that we succeed to keep undisturbed by bodily passions and use for attaining true knowledge, such striving makes sense. And this is what Plato is teaching in *Timaeus* 90b–d.

CHAPTER TWO

THE ACTIVE PRINCIPLE IN STOIC PHILOSOPHY

Håvard Løkke

Introduction

Unlike the contemporary Epicureans, the ancient Stoics believed that there exists an active principle that governs the cosmos in accordance with a rational plan. This is, in our parlance, a metaphysical belief. But whereas Aristotle's works after the Hellenistic era were edited in such a way that a part of his philosophy came to be called metaphysics, this did not happen to the Stoics. So in order to get as clear as we can on the Stoics' views and arguments on the active principle, we must turn to the part of their philosophy called physics.

The Stoics divided philosophical inquiry into three parts. In addition to physics, there was one part dealing with ethics and another with logic. All Stoics agreed that these parts are closely related. But there was some disagreement as to what the relations are. Some Stoics said that if philosophy were a garden, physics would be its trees, ethics its fruits, and logic its surrounding wall; others said that if philosophy were an egg, physics would be its yolk, ethics its white, and logic its shell.[1] Whatever we make of these analogies, it is clear that physics is a central subject in Stoic philosophy. But it should also be clear that most of the Stoics did not study physics for its own sake alone; at least Chrysippus (ca. 280–205 BC), the third school-arch of the Stoa, held that one should not approach Stoic ethics without having first heard at least the main points in Stoic physics.[2]

Further, all Stoics agreed that physics is itself subdivided. But again there was some disagreement as to what the subparts are. On one view, physics is made up of five topics: "On bodies", "On principles", "On elements", "On gods", and "On limits, place, and void"; on a different

[1] Diogenes Laertius, *Lives of Eminent Philosophers* 7.39–40; LS 26B.
[2] Plutarch, *On Stoic Self-Contradictions* 1035b–d.

view, it consists of three subparts: "On the cosmos", "On the elements", and "The inquiry into causes".[3] Whatever we make of this disagreement, it is clear that four notions are of key importance in Stoics physics: body, principle, element, and causation. My discussion in this paper is focused on these four notions—plus one that does not make up a separate topic, namely the notion of *pneuma*. *Pneuma* is a physical stuff that is made up of the elements fire and air; on the Stoic view, it is the vehicle of the active principle, the reason that governs the cosmos and with which we human beings ought to govern our lives.

As is well known, our evidence for early Stoic philosophy is quite poor. There is in fact a lot of material bearing on nearly all parts of Stoic philosophy, but the main problem is that much of this material is made up by polemical attacks from hostile adversaries and hence only indirect testimony, at best. Having said that, our evidence for Stoic physics is relatively good, and maybe better than our evidence for any other part of their philosophy except ethics. This is mainly because we are so fortunate as to have two complete (or nearly complete) ancient texts bearing on the issue. One is Seneca's *Natural Questions*, written, it seems, in 62–65 AD. The other text is a book on astronomy, now known as *The Heavens*, written by a Stoic called Cleomedes, probably mid-second century AD.[4] There is also much useful information about Stoic physics in ancient doxographers, like Diogenes Laertius and Johannes Stobaeus. So we have enough evidence to piece together a picture of the Stoics' views and arguments on the active principle. Yet, it is only fair to add that the access we now have to Stoic physics is limited; it is as if we had to piece together Aristotle's physics from his *Meteorology* and a few isolated doctrinal reports, without having either the *Physics* or the *De anima*.

Here is how I proceed in trying to create as comprehensive a picture as possible. First I briefly sketch the historical background and context out of which I believe the Stoic position arose. Then I look at the notion of body, which the Stoics seem to regard as the pivotal one in their theory. This leads to a discussion of that into which body can be analyzed, i.e. the active and the passive principle, and that out of which a body is made up, i.e. the four elements. And this in turn leads to a discussion of *pneuma*, the bodily vehicle of the active principle, which

[3] Diogenes Laertius, *Lives of Eminent Philosophers* 7.132; LS 43B.
[4] See *Cleomedes' Lectures on Astronomy*.

is made up of the two elements fire and air. I discuss *pneuma* in two sections. First I look at how *pneuma* moves in its own right; then I look at how it is mixed 'through and through' with sluggish matter, made up of the elements earth and water. And since *pneuma*, the vehicle of the active principle, is a causal power, I then look briefly at the Stoic theory of causation. I end with some general remarks on the relation between Stoic physics and Stoic ethics.

The historical background

The Stoics seem to have developed their physics in opposition to Plato. We can see this if we look at two famous passages from the *Sophist*. Here is first the Visitor's description of a view held by some unnamed Giants, in opposition to Gods:

> One group [of philosophers] drags everything down to earth from the heavenly region of the invisible, actually clutching rocks and trees with their hands. When they take hold of all these things they insist that only what offers tangible contact *is*, since they define being as the same as body.[5]

We will see that the Stoics subscribed to the view that only bodies exist. In the *Sophist* the Visitor argues against this first characterization of being, attributed to the Giants, and then a bit later in the dialogue he offers another characterization:

> I'm saying that a thing really *is* if it has any capacity at all, either by nature to do [*to poiein*] something to something else or to have even the smallest thing done to it [*to pathein*] by even the most trivial thing, even if it only happens once. I'll take it as a definition that *those which are* amount to nothing other than *capacity*.[6]

Again, we will see that the Stoics subscribed to the view that something has being to the extent that it has the ability to do something or the ability to be done something to, abilities they argue that only bodies have. So it seems that the early Stoics made the quite bold move of subscribing to *both* views attributed to the Giants in the *Sophist*, even if the Visitor treats these as alternatives, or at least the latter as a revised

---

[5] Plato, *Sophist* 246a7–b1; translation by N. White in Cooper (ed.), *Plato. Complete Works*.

[6] *Sophist* 247d8–e4, the first emphasis added.

version of the former.[7] By making this bold move the Stoics also committed themselves to a view that the Visitor finds unacceptable, namely that "justice and intelligence and the rest of virtue, and also their contraries" (247b1–2) are bodies. Whether or not this is the origin of this view, the Stoics notoriously maintained that all qualities—including the virtues—are bodies.

But the early Stoics seem to have had a wider agenda than just dismissing Platonic dualism and embracing monism. This is suggested by the fact that, in the passages just quoted, the Visitor is not using the term 'principles' (*archê*). What he says, rather, is that the ability to act and the ability to be acted upon are 'powers' (*dunameis*). By contrast, as we will see, the Stoics refer to the ability to act and the ability to be acted upon as two principles. In thus using the term 'principle', it seems the Stoics looked beyond the Platonic challenge and back to the so-called pre-Socratics, whom the Visitor is addressing in the part of the *Sophist* from which I have quoted. It is often assumed that the Stoics were interested in issues from pre-Socratic philosophy, some of which had perhaps been brushed aside by Aristotle. It is also often assumed that in doing this, the Stoics associated themselves with Heraclitus. None of this should be accepted uncritically.[8] But for our purposes, I find it important to bear in mind that the Stoics seem to have meant their theory of the active and passive principle as a piece of pre-Socratic metaphysics, i.e. as an answer to the old philosophical question of what everything really is. Having said that, this common ground between Stoicism and pre-Socratic metaphysics may have been a characteristic of the time of Zeno and Cleanthes, i.e. during the first two generations of the Stoa. But our evidence on this question is very poor.

More important, I find, is the fact that Stoic physics from Chrysippus onwards seems to have been influenced by contemporary science, especially medical theory.[9] At around the middle of the third century BC, medical theorists in Alexandria made discoveries that were relevant for the old philosophical questions of *where* the source of human activity is located and *how* this source of activity generates movements. At around Aristotle's time, it used to be commonly assumed that the heart is the source of human activity by distributing

[7] See Sedley, "Hellenistic Physics and Metaphysics", p. 383.
[8] See especially Hahm, *The Origins of Stoic Cosmology*.
[9] See von Staden, *Herophilus: the Art of Medicine in Early Alexandria*.

blood through the veins and *pneuma* through the arteries. The new medical theorists came to question this assumption, having discovered the nerves after being allowed to do anatomical dissections of human bodies. So they pointed out that a key role seems to be played by the brain and the nerves as channels of *pneuma*. It seems to me (and this is not very controversial) that Chrysippus' notion of *pneuma* should be understood against this background. He held a conservative view on the question of where the source of motion is located. As Galen later testifies to, Chrysippus insisted that "the governing part of the soul" is located in the heart. But he seems to have subscribed to some of the new ideas presented by the medical doctors in that he ascribed to *pneuma* a more central role in agency than Aristotle had done. Chrysippus also moved beyond the medical theorists in making *pneuma* a governing power, not only in animals, but also in the cosmos as a whole. In effect, he turned a theory from medical science into a metaphysical doctrine. Or, rather, it is fair to say that Chrysippus' emphasis on *pneuma* and its causal role in the cosmos is best understood as an attempt to accommodate ideas that he had inherited from his Stoic predecessors within the framework of the most advanced physical theories of his own time.

We should also bear in mind that the early Stoics were concerned with the question of what epistemic status one's views on physics may have. Chrysippus seems to have held that the best one can achieve in physics are plausible or reasonable views, i.e. conclusions that are more likely than not to be true. For example, on the subject just mentioned, where the mind is located, Chrysippus is said to have written that "it is reasonable [*eulogon*] that that […] from which speech comes [i.e. the chest and, more accurately, the heart], is the governing part of the soul".[10] This can hardly be regarded as a plausible or reasonable view on statistical grounds, since it was denied by most people at the time, including leading scientists. So what Chrysippus means, I take it, is that it is reasonable to locate the mind in the heart because the mind *ought* to be located there. In other words, the account Chrysippus gives is, as he sees it, the sort of account one must give of a natural phenomenon in order to accommodate the fact that the cosmos is rationally and providentially

[10] Galen, *On the Doctrines of Hippocrates and Plato* 2.5.15; von Arnim, *Stoicorum Veterum Fragmenta* II, p. 894.

governed. And since there are lots of passages in which Chrysippus is said to have used similar expressions, the point can be generalized. The main aim of physics, according to Chrysippus at least, is to give plausible or reasonable explanations of the way things *ought* to be, and this primarily, I take it, in order to make Stoic ethics a meaningful enterprise. This is a view Plato, too, may seem to subscribe to when he writes in the *Timaeus* that the account he is about to give, is a "likely account" (*eikôs logos*).

On the Stoic notion of body

The Stoics drew a generic ontological distinction between 'that which is' (*to on*) and 'that which subsists' (*to huphistamenon*).[11] The first class includes only bodies (*sômata*).[12] So according to the Stoics, only bodies are; i.e., as I shall say, only bodies exist. The class of subsisting entities, on the other hand, consists only of what the Stoics called 'incorporeals' (*asômata*): place, time, void, and the so-called 'sayables' (*lekta*).[13] Or, rather, an incorporeal entity either subsists or obtains.[14] For instance, time subsists as the past, the present, and the future, but it obtains only as the present; likewise, everything that can be expressed in language, subsists as a 'sayable', but only a 'sayable' that expresses an existing fact obtains. This distinction between subsisting and obtaining need not worry us here. What is important for our purposes is that the Stoics had a generic ontological distinction, according to which bodies exist, while incorporeal entities do not exist.

The Stoics' definition of body seems to have been "what has threefold extension—length, breadth, and depth—together with resistance".[15] This

---

[11] Galen, *De methodo medendi*; *The Therapeutic Method*, 2.7,40; LS 27G.

[12] Alexander of Aphrodisias, *On Aristotle's Topics* 301,19–25; LS 27B. See also Plutarch, *Reply to Colotes*.

[13] Some sources also include limits (*perata*) in the list.

[14] Stobaeus, *Antilogii libri duo priores qui inscribi solent Eclogae physicae et ethicae* I, p. 106. See also Plutarch, *On Common Conceptions*, pp. 1081f.

[15] This definition must be compiled from various sources. Stobaeus 1.143, 24 (von Arnim, *Stoicorum Veterum Fragmenta* II. 357) has: "sôma esti to trichê diastaton, platei, bathei, mêkei", saying nothing about resistance; Galen, *On incorporeal qualities* 19.483,13–16 (LS 45F) has: "to trichê diastaton meta antitupias", without specifying the three dimensions; Diogenes Laertius, *Lives of Eminent Philosophers* 7.135 (LS 45E), specifies the three dimensions, and adds that "this is also called solid [*stereon*] body". Cleomedes (*Caelestia* I.5, pp. 128ff.) speaks as if the solid bodies (*ta sterea tôn sômatôn*)

definition raises difficulties which I shall not comment on here. More important for our purposes is the fact that the Stoics often described the distinction between incorporeals and bodies by characterizing the latter as "what is capable of acting or of being acted upon".[16] By maintaining this, the Stoics subscribed to one aspect of the view we have seen Plato attributed to the unnamed Giants in the *Sophist*, namely the view that being is the same as body.

We have seen that the Giants, according to Plato, were also "clutching rocks and trees with their hands", and that they were insisting that "only what offers tangible contact *is*". If by 'what offers tangible contact' (*ephaptomenoi*) is meant 'what is perceptible by means of touch', I think the Stoics would subscribe to this aspect of the Giants' view also, maintaining that all bodies can in principle be perceived. But when the Stoics said that only bodies exist, they clearly did *not* mean to say that the cosmos consists solely of middle-sized physical objects like rocks and trees. Rather, the Stoics are using 'body' in a strictly technical sense. I think we may see this if we consider the fact that among the entities the Stoics regarded as bodies are such entities as qualities, voices, and the soul. These were not usually regarded as bodies, neither by common language users, nor by most other contemporary philosophical schools. So the Stoics deviated from ordinary usage of the term 'body'.

This creates a problem for the Stoics. For even if they were happy to argue that the language of the (other) philosophical schools is often confused, they were quite serious about their own philosophy harmonizing as much as possible with the pre-theoretical views people have, the so-called 'common notions'. Plutarch, for example, is quick to point out that the Stoic notion of body is at odds with the common notion of body in many respects.[17] What is important for our present purposes is merely the fact that when the Stoics deviated from common language

---

contrasts with *pneuma*, i.e. referring only to matter. This seems to imply that 'solid body' refers to the elements making up matter, i.e. water and earth. But surely this cannot be taken to mean that *pneuma*, made up of air and fire, is *not* extended. So I leave out the notion of solid body from the definition.

[16] Cicero (*Academica*; LS 45A): "[N]ec […] aut quod efficeret aliquid aut quod efficeretur posse esse non corpus"; see also Sextus Empiricus (*Adversus Dogmaticos* II, p. 263): "[T]o […] asômatôn […] oute poiein ti pephuken oute paschein", translation by R. Bett in Sextus Empiricus, *Against the Logicians*, p. 141; see also Cleomedes, *Caelestia* I.1, 66–67.

[17] See especially Plutarch, *On Common Conceptions* 1077c–e.

usage on such a crucial point as the notion of body, they must have taken themselves to have strong reasons for doing so.

It seems to me that these strong reasons were of metaphysical nature. For the Stoics seem to have relied on their characterization of body as 'what is capable of acting or of being acted upon' in order to argue that entities like the soul and voices are to be regarded as bodies, regardless of what people think of them. For instance, the Stoic Cleanthes is said to have argued thus on the question of whether the soul is a body: "No incorporeal interacts with a body, and no body with an incorporeal, but one body interacts with another body. Now the soul interacts with the body when it is sick and being cut, and the body with the soul; thus when the soul feels shame and fear the body turns red and pale respectively. Therefore the soul is a body."[18] So the bodily nature of the soul is inferred from a metaphysical assumption, that only bodies can interact. We find much the same pattern of reasoning on the question of whether voice is a body. Plato and Aristotle are said to have argued that voice is incorporeal because "it is not the air, but the configuration of what pertains to air". Against this the Stoics argued that "everything that does [something] and undergoes [something] is a body, and voice acts [on something] and does [something]", meaning by a voice's acting on something simply that voices are, e.g., heard.[19] What this shows is that the Stoics used the term 'body' strictly as a technical term to designate a metaphysical notion, not what people normally call bodies.

This creates a problem for our discussion of the Stoic views and arguments. For we need a term that refers to rocks and trees, i.e. to pebbles and oaks and elephants and sofas and all the things that we ordinarily call bodies. The Stoics seem to have had no single term for this. In what follows, I shall refer to such entities as 'objects', restricting the term 'body' to its technical Stoic use.

Two principles and four elements

For something to be a body, then, it must be able to act or be able to be acted upon. We can easily agree with some implications of this view. All

[18] Nemesius, *De natura hominis* 78,7–79,2; LS 45C; see also Ps.-Plutarch (Aëtius), *Placita* IV.2–3.

[19] Ps.-Plutarch, *Placita* IV.20.

of us would presumably agree that it is because such objects as knives and loaves are bodies that a knife can cut a loaf and a loaf be cut by a knife. Most of us would probably also agree that it is because the soul is a body, in the Stoic sense, that we blush when we are ashamed (see the quote from Cleanthes in section "On the Stoic notion of body" above), or easily develop a depression if we get crippled or suffer from a chronic disease. But few, I suspect, would agree with the Stoics that qualities, such as courage and wisdom, are bodies too.[20]

In any case, this ability that a body has to interact with other bodies is what the Stoics seem to have in mind when they say that any body can be analyzed into two principles. One principle is called 'that which acts' (*to poioun*); I shall call it the active principle. Another principle is called 'that which is acted upon' (*to paschon*); I shall call it the passive principle. The active principle is also called 'god', 'reason', 'cause', 'nature', and other things. The passive principle is also called 'matter', 'unqualified substance', and other things. Here is Seneca:

> Our Stoic philosophers, as you know, say that there are two things in nature from which everything is produced—cause and matter. Matter lies inert, an entity ready for anything but destined to lie idle if no one moves it. Cause, on the other hand, being the same as reason, shapes matter and directs it wherever it wants, and from matter produces its manifold creations. Hence a thing must be made *from* something, and *by* something. The latter is its cause, the former its matter.[21]

The Stoics seem to hold that the principles themselves are bodies.[22] Yet it seems to me that the principles are best regarded as aspects of every object (in the sense specified in the section "On the Stoic notion of body" above), and that these aspects are best characterized in terms of their causal roles. Under the aspect of being an agent, of having an active causal role, an object is causing things to be certain ways, or causing things to happen in certain ways. This active causal power can be directed both at the object itself and at other objects. For example, by virtue of containing the active principle, a piece of silver is causing

[20] See Plutarch, *On Stoic Self-Contradictions* 1054a–b, according to which qualities are *pneumata* and "aeriform tensions".

[21] Seneca, *Epistulae Morales* 65.2; LS 55E.

[22] This used to be contested. But it is expressly said in one source (Eusebius, *Praeparatio evangelica*, xv. 15, 14, 1) and no source lists the principles among the incorporeals. For a brief discussion of the problem, see David Furley, "Cosmology", pp. 435–436.

itself to be a certain way, providing itself with the quality whiteness; likewise, by virtue of containing the active principle, a lump of iron is causing itself to be a certain way, providing itself with the quality hardness.[23] On the other hand, under the aspect of suffering causal impact, an object is made into that which the cause makes it into. For example, by virtue of containing matter, pieces of silver and lumps of iron are made into white and hard objects, respectively. So, as Seneca says in the passage just quoted, matter is causally inert; it is merely that from which the active cause produces certain effects.

Further, the Stoics held that, in addition to the active and passive principles, there are four elements. Or, rather, they held that each of the two principles is made up of two elements. At least in the created cosmos, the active principle is identified with *pneuma*, which in turn is a mixture of the elements fire and air. On the other hand, the passive principle is identified with a combination of the two remaining elements, namely earth and water.[24] This is again perhaps best understood as different aspects of objects characterized in terms of their causal role. This understanding is consistent, at least, with Plutarch saying that, according to the Stoics,

> earth and water sustain neither themselves nor other things, but preserve their unity by participation in a pneumatic and fiery power. But air and fire, because of their tensility, are able to sustain themselves, and by blending with the other two provide them with tension and also stability and substantiality.[25]

The Stoics could argue in this way because they regarded earth and water as causally inert elements making up the passive principle, called 'matter', while air and fire have tensility because they are causally active, making up the active principle. There is a question of how we are to understand this. I return to this shortly.

First, however, I want to briefly discuss what philosophical purpose the distinction between two principles and four elements is meant to serve. I believe two purposes may be important. For one thing, the notion of an active principle is crucial in Stoic cosmo*logy* in that it underlines *pneuma*'s role as the universal self-moving causal power

[23] The examples are from Plutarch, *On Stoic Self-Contradictions* 1053f–1054b. See also Simplicius, *Aristotelis Categorias* 238.30–31.
[24] Nemesius, *De natura hominis* 52, 18–19.
[25] Plutarch, *On Common Conceptions* 1085d.

in the created world. The active principle operating in the created world, i.e. *pneuma*, is causing everything that exists by moving itself and thus acting on matter. Here is Sextus:

> The [unqualified] substance of what exists, [the Stoics] say, since it is without any motion from itself and shapeless, needs to be set in motion and shaped by some cause. For this reason […], when we see the matter of the universe moving and possessing form and structure we might reasonably inquire into the cause which moves and shapes it into many forms. It is not convincing that this is anything other than a power which pervades it, just as soul pervades us. Now this power is either self-moving or moved by some other power[.] […] So there exists a power which in itself is self-moving, and this must be divine and everlasting. […] So this power would be god.[26]

So in the created cosmos, the role of the active principle goes beyond the role of the elements fire and air in that it is a self-moving causal power driving the whole teleological scheme of things. (I will expand on this causal role shortly.) On the other hand, the elements are needed to explain the observable ways of the world, i.e. how god concretely manifests this causal power in matter: e.g., why the climate is the way it is; why the elements are transformed into each other in the ways they are; and so forth.

The other reason why the Stoics needed a notion of an active principle, in addition to the two elements out of which it is made, has to do with their cosmo*gony*. For it is in virtue of the cosmos being governed by an active principle that the Stoics can argue that it periodically turns into fire and then is created again. This is known as the Stoic theory of the conflagration (*ekpurôsis*) and the regeneration (*palingenesia*) of the cosmos. Here is how Diogenes Laertius describes the latter process:

> Now in the beginning, god, being all by himself, turns the whole of substance by way of air into water; and just as seed is contained in the sperm, so god, being the seed-formula [*spermatikos logos*] of the cosmos, is deposited as such in the moisture, making matter well adapted for the generation of things in succession. So he generates first the four elements, fire, water, air and earth.[27]

---

[26] Sextus Empiricus, *Adversus Dogmaticos* III, 75–76, translation Sedley ("Hellenistic Physics and Metaphysics", p. 386).

[27] Diogenes Laertius, *Lives of Eminent Philosophers* 7.136, translation Furley ("Cosmology," p. 434).

It is far from clear how we are to understand this. What seems clear, however, is that the Stoics needed to distinguish principles from elements in order to account for the process in which god turns everything into itself and then regenerates the whole cosmos again. For this account presupposes that the principles are indestructible, while the elements are destroyed at the conflagration, as Diogenes expressly says in an earlier passage.[28]

Regardless of how we understand the conflagration and regeneration, there is a problem with fire, namely that it seems to play a double role. On the one hand, there is 'the craftsmanlike fire' (*pur technikon*), which is identified with god and reason; it is pure and eternal, i.e. survives the conflagration. On the other hand, there is 'the uncraftsmanlike fire' (*pur atechnon*), which, as one of the elements, gets mixed with air to produce *pneuma*, and thus, like the other elements, is destroyed at the conflagration. David Sedley, from whom I have borrowed these translations, assigns this double-role conception of fire to the earliest Stoa, a tradition that was later superseded, not replaced, by Chrysippus' emphasis on *pneuma* rather than fire as the active power.[29] Whatever the truth of the matter is, it seems clear that the Stoics must have allowed 'fire' to be used in two different ways; in one sense, it is identical with god; in another sense, it is mixed with air to make *pneuma*.

On pneuma *(i): the way it moves in its own right*

We have seen that *pneuma* is a combination of the elements air and fire and a vehicle of the active principle that is governing the cosmos in accordance with a plan. So we will come to understand better how the active principle operates if we can come to understand better how *pneuma* operates. The following two points seem to me especially illuminating and important. First there is the fact that *pneuma* of its own has a peculiar sort of movement, which the Stoics called 'tensional'. Secondly, there is the fact that this moving *pneuma* is mixed with matter in a peculiar way, which the Stoics called 'total mixture'. I shall look at the two points in turn.

---

[28] Diogenes Laertius, *Lives of Eminent Philosophers* 7.134.

[29] Sedley, "Hellenistic Physics and Metaphysics", pp. 387–388. See also Furley, "Cosmology," p. 440.

First, then, there is the peculiar sort of movement that *pneuma* has in its own right. Our richest source on the subject, Alexander of Aphrodisias, describes this movement as a "simultaneous movement […] in opposite directions", and (in what he says are the Stoics' own words) a "moving simultaneously both out of itself and into itself".[30] Nemesius, likewise, says that, according to the Stoics, there exists a certain kind of movement that moves simultaneously inwards and outwards.[31] Both Alexander and Nemesius dismiss the doctrine, finding it very puzzling. We must do our best to make sense of the way *pneuma* moves, according to the Stoics, but should bear in mind that we have little evidence on the issue.

One way of approaching this task is by making comparisons with other physical phenomena that we are more familiar with, such as radio waves, oscillating rubber bands, and so forth.[32] This sort of approach could well shed useful light on the subject, but however suggestive the comparisons are, they always risk being anachronistic. Perhaps it is better to try and make sense of *pneuma*'s movement in terms of the Stoic notion of tension (*tonos*), for we know that the Stoics called the pneumatic movement 'the tensional movement' (*hê tonikê kinêsis*).[33] One should bear in mind, however, that what one might learn from this approach, is not what *pneuma*'s movement *is*, but merely what it *does*, what its effects are. For what we know is that it is by moving in whatever way it does, that *pneuma* is providing some bodies with tension, and this by virtue of itself being in possession of 'tensility' (*eutonia*). We saw in section "Two principles and four elements" that, according to Plutarch, the Stoics held that the elemental bodies air and fire, that make up *pneuma*, "are able to sustain themselves [because of their tensility], and by blending with [earth and water], provide them with tension and also stability and substantiality".[34] Plutarch is here talking about what happens on the level of the elements. Seneca seems to apply the same doctrine to a more particular level in the following passage:

> You will come to see the tension [*intentio*] of air if you consider […] voices, which are faint or clear accordingly as the air vibrates. For what

---

[30] Alexander of Aphrodisias, *De mixtione*, 224, 23–26, translation by R. Todd (*Alexander of Aphrodisias on Stoic Physics*, p. 137).
[31] Nemesius, *De natura hominis* 18.6–7.
[32] See, e.g., Sambursky, *Physics of the Stoics*, chapter 2.
[33] Nemesius, *De natura hominis* 18.6.
[34] Plutarch, *On Common Conceptions* 1085d.

> is voice except the tension of air formed by the tongue striking it so as to become audible? Or what about running and all other motions? Are they not the effects of air in tension? This is what gives strength to sinews, speed to runners.[35]

Seneca here seems to be talking about what we call events, e.g. a particular case of a voice's sounding or of an animal's running. In fact, he seems to say that *all* events are "effects of air in tension". So both an event like a sounding of a voice and an event like a run in the park, are what they are because of the way *pneuma* moves. Presumably, shouting is caused by *pneuma* moving in one sort of way and whispering by it moving in a different sort of way; running quickly is caused by *pneuma* moving in one sort of way and running slowly by it moving in a different sort of way; and so forth.

So much for the bodies called elements and events. But what about the bodies that we call objects? Are they too made into what they are by *pneuma*'s movement? The answer is yes, but in two different ways, depending on whether the object in question is a unity or not.[36] This Stoic distinction between unified and non-unified objects seems to me to correspond to a distinction between natural objects and artificially created objects.[37] The Stoics seem to hold that natural, unified objects are provided with tension, while artificial, non-unified objects are not provided with tension, since *pneuma*'s tensional movement, by moving inwards, creates unity.

We can perhaps make sense of this if we look at something Simplicius says about how the Stoics distinguished between states and dispositions. After suggesting that, according to the Stoics, an artificially created object can merely be in a certain state, while a natural object can be disposed in a certain way, he adds that "states are characterized in terms of the external conditions, but dispositions in terms of the activities from themselves".[38] I take this to mean that any natural, unified object is providing itself with its qualities (and this, as we shall see shortly, because of the way *pneuma* is running through it), while any artificial object is what it is only because it is subject to some causal impact from some natural object external to it. Seneca too seems to testify to this when he says that "[a]ny time I say 'one,' remember that I am

---

[35] Seneca, *Naturales Questiones* 2, 6, 3–4, Corcoran's translation slightly modified.
[36] See *ibid.* 2, 2, 2.
[37] Cf. Sedley, "Hellenistic Physics and Metaphysics", p. 402.
[38] Simplicius, *Aristotelis Categorias* 238.10–11.

referring […] to the characteristics of a natural body that is cohesive by its own oneness, not by external help".[39] The sorts of cases Seneca and Simplicius have in mind are, I believe, for example that a ship must be made by someone and maintained by someone; an army must be put together by someone and organized by someone; and so forth. In fact, the Stoics seem to underline the difference between natural and artificial objects by insisting that the latter do not strictly speaking *have* qualities at all; they are merely qualified.[40]

On pneuma *(ii): the way it is mixed with matter*

In all objects, *pneuma*'s tensional movement is such as to permeate matter completely. The Stoics referred to this doctrine as the theory of 'total mixture', literally 'mixture through and through' (*krasis di' holou*).[41] Probably following Aristotle, the Stoics distinguished between three types of combination.[42] Some combinations are juxtapositions, such as e.g. a heap of grain, or any other object made up of objects placed next to one another. An object created by juxtaposition has a low degree of unity and is easily dissolved when each component regains its original condition. Other combinations are fusions, such as e.g. medical drugs and, I take it, a number of other mixtures that we call 'chemical'. These combinations are such that some one, new object is created out of two or more ingredients, and the ingredients are destroyed when the new object comes into being. And then there is a third type, which is the one the Stoics called 'total mixture'. A combination of this type is such that a new object is created but in such a way that the ingredients can be separated out again. Both Aristotle and the Stoics seem to hold that such combinations are possible.

The combination of *pneuma* and unqualified substance is of the last type, i.e. a total mixture. The best illustration of what the Stoics have in mind is perhaps the mixture of soul with unqualified substance to make up a living being, a person. The soul, which is *pneuma*, permeates the whole person, from head to toes, while retaining both its peculiar qualities, e.g. the virtues, and its power to separate again

[39] Seneca, *Naturales Questiones* 2, 2, 4.
[40] Nemesius, *De natura hominis* 18.8; Simplicius, *Aristotelis Categorias* 214.33–34.
[41] Todd, *Alexander of Aphrodias on Stoic Physics*, pp. 29–73.
[42] See his *De Generatione et Corruptione* 1.10.

from matter, which it does when the person dies. Later adversaries of Stoicism, e.g. Plutarch and Alexander of Aphrodisias, found this theory objectionable, not because they denied the possibility of such mixtures, but because the Stoics took it to imply that two or more bodies occupy the same space. To my mind, the problem will be at least partly solved if one bears in mind that the Stoics are using 'body' in the technical sense outlined above, a sense that differs not only from common usage, but also from Aristotelian terminology. In any case, the Stoics are committed to the view that any object has two bodies in it—*pneuma*, the vehicle of the active principle, and sluggish matter, the vehicle of the passive principle—which occupy the same space, delimited by the surface of the object, and which can be separated.

Now *pneuma* permeates natural objects in different ways and thus creates different kinds of objects.[43] First, inanimate objects are permeated by *pneuma* in such a way as to create in each of them a mere disposition (*hexis*); in virtue of having a mere disposition, each natural object is held together as a particular object, with its peculiar qualities—like the pieces of iron and silver mentioned by Plutarch (see pp. 57–58 with n. 23 above). Next, plants are permeated by *pneuma* in such a way as to create in each of them a nature (*phusis*); in virtue of having a nature, in addition to a mere disposition, plants are not only held together, but also able to move in very simple ways by responding to stimuli. The Stoics seem to hold that the plants' ability to move themselves consists in their ability to grow and reproduce.[44] Finally, animals are permeated in such a way as to create in each of them a soul (*psuchê*); in virtue of having a soul, in addition to a mere disposition and a nature, animals are not only held together and able to grow and reproduce, but also able to move in more complex ways by forming impressions and acting on impulses. This scale of nature is part of what is at issue in the following testimony:

> The cosmos […] is ordered by reason and providence […] inasmuch as reason permeates every part of it, just as soul does in us. Only there is a difference in degree; in some parts there is more of reason, in others less. For through some parts it passes as a mere disposition, as is the case with our bones and sinews; while through others it passes as reason,

[43] Cicero, *De Natura Deorum* 2.33–44, 81, 122. See also Simplicius, *Aristotelis Categorias* 306.19–27.

[44] Hahm, "Self-Motion in Stoic Philosophy", p. 206.

> as in the governing part of the soul. Thus, then, the whole cosmos is an animal, endowed with soul and reason[…][45]

That "the whole cosmos is an animal, endowed with soul and reason", is a strong and rather strange claim to make. Yet it is a view to which the Stoics are deeply committed, so much so in fact that a leading scholar refers to it as "the foundation of Stoic cosmology".[46] Strange though it is, the view is a corollary of what the same scholar calls "the most distinctive claim of the Stoics", namely that the cosmos is governed by reason. For since reason permeates the cosmos just as soul permeates each animal, the cosmos is the same sort of unified object as an animal is. Thus, the Stoics probably would have said that we ought to get used to saying what Diogenes says in the passage above, that the cosmos itself is a living being.

Active causation: moving and sustaining

I have now discussed three of the issues making up Stoic physics, namely bodies, principles, and elements. I have also looked at the notion of *pneuma*, trying to make sense of the way it moves in its own right and the way it is mixed with sluggish matter. This leads to a discussion of one of the sub-parts of Stoic physics, namely the inquiry into causes. For because it is the 'dual element' that is identical with the active principle, *pneuma* too can be called 'the greatest cause' and 'the overall causal power'.[47] In this section I will thus look briefly at *pneuma*'s causal role. This too will give us a better understanding of what the active principle is and how it operates.

It should come as no surprise that the Stoics' views on causes differ markedly from the views of their Platonic and Aristotelian precursors. The Stoic theory of causation is very elaborate and highly influential.[48] For our purposes, the following two points are important. First, as we have seen suggested already in the Seneca passage quoted in the section

---

[45] Diogenes Laertius, *Lives of Eminent Philosophers* 7.138–139.

[46] Furley, "Cosmology," p. 436.

[47] Plutarch, *On Stoic Self-Contradictions* 1055e; Stobaeus, *Anthologii libri duo priores qui inscribi solent Eclogae physicae et ethicae* I.79.1–2; see also Seneca, *Epistulae* 65.2–4.

[48] See Bobzien, "Chrysippus' Theory of Causes", pp. 196–242; Frede, "The Original Notion of Cause", pp. 125–150.

"On the Stoic notion of body", the Stoics held that there is just one cause, which Seneca there calls reason. A few lines further down, Seneca says expressly, and in expressed contrast to Aristotle, that "[t]he Stoics take the view that there is only one cause, that which does something".[49] So reason, as the conveyer of the active principle, is that which does something; it is what was later called "the active [*energetikon*] cause".[50] This active cause is not conceived by the Stoics as an event, but as an object, or, rather, the active principle in it. For example, when one billiard-ball hits another and sets it in motion, it is not the hitting that counts as the cause, but the billiard-ball itself, or, strictly speaking, the *pneuma* in the ball. So since this *pneuma* is also called reason (and a host of other things), Seneca can rightly say that reason is the only cause, and this because reason alone does something, e.g. moves billiard-balls.

The other point I want to make is that reason, i.e. the active principle, is not only making things happen, e.g. setting billiard-balls in motion; it is also causing things to be what they are and to remain as they are. Later Stoics expressed this point by saying that the active principle is not only the *moving* cause, but also the *sustaining* (*sunektikon*) cause. I have already said something about the sense in which *pneuma* is the moving cause. And it should be fairly clear what the Stoics meant by saying that *pneuma* is the sustaining cause. The name itself—'*sunektikon*'—seems to come from the earlier Stoics' use of various forms of the verb '*echein*' (to hold) in referring to the causal relationship between *pneuma* and matter. There is notably the verb '*sunechein*' (to hold together, to sustain), used when *pneuma* is said to hold matter together, and matter is said to be held together by *pneuma*.[51] I take it that it is because of this sustaining power that objects remain over time what they are: e.g., a billiard-ball remains as it is over time. There is also the verb '*parechein*' (to provide), used when *pneuma* is said to be providing the world as a whole and each object in it with their qualities.[52] I take it that it is because of such a providing power that objects are what they are and behave as they do: e.g., a billiard-ball is round and will therefore start rolling when hit by another billiard-ball.

---

[49] Seneca, *Epistulae* 65.4.

[50] Sextus Empiricus, *Outlines of Pyrrhonism* 3.14.

[51] Plutarch, *On Stoic Self-Contradictions* 1053f. See also Cleomedes, *Caelestia* I. 1, 102.

[52] Plutarch, *On Common Conceptions* 1085d (quoted on p. 58 above); see also Simplicius, *Aristotelis Categorias* 238.30–31.

Chrysippus seems to have operated with a distinction like the one between moving and sustaining cause, saying that the effects of the active principle are predicates that designate either movements or states.[53] His view seems to have been that there is a kind of predicates that can be said of natural objects in virtue of their dispositions, and this is the kind of predicates that designate the qualities this object is provided with in virtue of being held together by *pneuma*, in virtue of *pneuma* providing it with its qualities. It is the cause of these predicates coming to obtain of objects that later Stoics called the sustaining cause. So it seems clear that things are disposed as they are because of *pneuma* acting as the sustaining cause.

The Stoic theory of causation thus confirms the overall impression that pneuma is the vehicle of the active principle, operating throughout the cosmos as the only causal agent and this in two main respects, namely partly by providing objects with their permanent existence and their qualities, partly by making things happen. So when a knife cuts a loaf, it is *pneuma* that is providing the knife with its ability to cut and the loaf with its ability to be cut, and it is *pneuma* that makes the cutting happen.

Physics and ethics

I said at the outset that some Stoics regarded the study of physics primarily as a preparation for studying ethics. This should come as no surprise. After all, the Stoic cosmos has by now come to look very much like a human being: it is an animal living a life from birth to death; in this life it is ruled by a reason that governs the sluggish matter it contains; and so forth. What may cause surprise, however, is the fact that one of the ways in which Stoic ethics can be said to prefigure modern ethics, is in terms of a distinction between the active and passive aspects of our mind, a key point in some recent Kantian views on moral psychology. I shall say a bit more about the active principle's role in Stoic ethics shortly.

First, however, I want to illustrate briefly how physics could be regarded by a Stoic thinker as useful for ethics. I take my illustration from Seneca's introduction to book 6 of his *Natural Questions*, which is

[53] See Bobzien, *Determinism and Freedom in Stoic Philosophy*, pp. 19–26.

about earthquakes. This introduction is of special interest for our purposes because, while most of the *Natural Questions* is written in a dry academic style, book 6 opens on an intense, ethical note, asking "what can any man consider sufficiently safe if the very world is shaken and its most solid parts are made to sway?"[54] The reason for this rise in temperature, this sudden turn to ethics seems to be that book 6 was written shortly after Pompeii suffered an earthquake, in 62 AD. As far as I can see, Seneca's main point in the introduction to book 6 is that the Pompeii earthquake should serve as a reminder of why it is useful to study physics. First he observes that the families of the victims of the earthquake need consolation. But Stoic consolation is not for the faint hearted. Here is a sample from what Seneca says to comfort the grieving:

> It is necessary to die somewhere, sometime; the earth we know may well stand firm and keep itself within its own boundaries […] but it will one day be above me […]. What have I to complain of if Nature does not want me to lie in a commonplace death, if she places part of herself on top of me?[55]

I take it that Seneca's point is that grievance and fear is caused by not knowing how things are. And earthquakes can in fact be useful, Seneca seems to be suggesting, because natural phenomena awaken in us a wonder at the way nature works and hence a wish to know more about it. Here is what he goes on to say:

> Every one of these things [i.e. earthquakes, etc.] that make us wonder also makes us afraid. And since ignorance is the cause of our experiencing fear, is it not of considerable value to be rid of this ignorance, and so, of your fear? How much better would it be to examine the causes, indeed to focus with the entire mind on this inquiry? For it is impossible to find anything more worthy than a subject which not only attracts but absorbs the mind […]. The reward [of studying this subject, i.e. physics] will be to know Nature, and no prize is greater than this.[56]

So it is by acquiring knowledge of the way things are that one avoids fear and despair, and this, as the Stoics as well as the Epicureans stressed, without relying on superstitious religious beliefs. I have argued that physics, according to Chrysippus, aims at plausible or reasonable views

---

[54] Seneca, *Naturales Questiones* 6, 1, 4. All the translations from *Naturales Questiones* 6 are by J. Davie, from Seneca, *Dialogues and Essays*.

[55] Seneca, *Naturales Questiones* 6, 2, 7–8.

[56] Seneca, *Naturales Questiones* 6, 3, 4–4, 2.

(see pp. 53–54 above). So what I take the Seneca passages just quoted to illustrate, is, again, that Stoic physics is mainly concerned with giving plausible explanations of the way things *ought* to be in order to make Stoic ethics a meaningful enterprise.

It makes sense, therefore, that Chrysippus recommended that some of the plausible views of Stoic physics should serve as prefaces to the study of Stoic ethics. He seems to have heeded this recommendation himself, for, as Plutarch complains,

> be the subject goals or justice or good and evil or marriage and child-rearing or law and government, [Chrysippus] makes no remark about it at all unless […] he has prefixed Zeus, Destiny, Providence, and the statement that the cosmos, being one and finite, is held together by a single power[…][57]

The rationale behind Chrysippus' recommendation, as well as Seneca's harsh consolation, seems to be the fact that the active principle that causes everything in the cosmos (including earthquakes) is an entity of the same sort as the reason with which we ought to govern our lives. Hence, the metaphysical notion of an active principle is of direct relevance for moral psychology. One way of coming to see this, is by considering the fact that the Stoic term for the mind is 'the governing part of the soul' (*to hegemonikon*), which strongly connotes activity, while that which the mind can learn to control, are called 'emotions' (*pathê*), which strongly connotes passivity. So the relation between one's reason and one's emotions are like the relation between god and matter. And so the reason with which we ought to govern our lives has the sort of function in Stoic moral psychology that many modern philosophers call 'self-determination'. We will see this if we consider a slightly odd illustration that was often used by the Stoics, e.g. by Seneca to illustrate "the effects of the tension of air" (see pp. 61–62 above), namely running. When a person is literally running (or, as I have argued Chrysippus said, when the predicate '… is running' comes to obtain of a person), the person's running is caused by *pneuma* permeating her in a certain way. I have tried to explain what the Stoics might have meant by this. But running is also used metaphorically by the Stoics, to illustrate being 'carried away by one's emotions'. Here is Chrysippus quoted by Galen:

---

[57] Plutarch, *On Stoic Self-Contradictions* 1035b, translation slightly modified.

> When someone walks in accordance with his impulse, the movement of his legs is not excessive but commensurate with the impulse, so that he can stop or change whenever he wants to. But when people run in accordance with their impulse, this sort of thing no longer happens. The movement of their legs exceeds their impulse, so that they are carried away and unable to change obediently, as soon as they have started to do so. Something similar, I think, takes place with impulses, owing to their going beyond the rational proportion. The result is that when someone has the impulse, he is not obedient to reason.[58]

And since we ought to be 'obedient to reason', we ought to control our emotions, i.e. the impulses that go 'beyond the rational proportion'. This, I take it, is what the study of physics is mainly useful for. By studying the ways of nature one learns that one should make efforts to get reason to govern one's life, just as it governs the life of the cosmos.

[58] Galen, *On the Doctrines of Hippocrates and Plato* 4.2.14–17; LS 65J.

CHAPTER THREE

PLOTINUS ON ACT AND POWER

Eyjólfur Kjalar Emilsson

Introduction

Plotinus (205–70) was a Platonist philosopher, often called the founder of Neoplatonism, a movement which became the dominant philosophy and intellectual trend of late antiquity. As such it deeply influenced early Christian theologians and put very significant marks on medieval thought both in the East and the West, and in fact on Muslim thinkers as well as Christian ones. Plotinus was a genuine Platonist who wished to extract from Plato's writings a systematic doctrine. As everyone familiar with Plato knows, however, his writings are of such a nature that it is by no means a simple task to determine what he actually believed, let alone to present this as a systematic set of doctrines. In his presentation of what he takes to be the true Platonic view on any topic Plotinus uses quite a bit of Aristotelian vocabulary and some concomitant doctrine as well. As was common among Platonists at the time, he seems to have regarded Aristotle as a kind of deviant Platonist: he could be used when needed but was not to be entirely trusted.

Even if it is true that Plotinus approached Plato and the tradition as systematic philosophy that provided a coherent world-view, he hardly appears as a systematic philosopher in his own writings. Nowhere does he present his grand view of things in an orderly way. His writings, the *Enneads*,[1] grew out of discussions in his school in Rome, and are in general more problem-oriented than seeking to provide an overview, though Plotinus often finds it necessary to give some sort of overview in order to put the problems into context. Nevertheless, it is clear that

[1] Plotinus' younger associate, Porphyry, edited his works posthumously. The name *Enneads* (meaning 'sets of nine') as well as the titles of the treatises is due to this edition. There are in all 54 treatises divided into six enneads. References to Plotinus' works usually give the ennead, treatise, chapter, and possibly lines. Thus, 'III.6.1, 11–12' means 'third *Ennead*, sixth treatise, chapter 1, lines 11–12'.

behind these writings there lies an attempt at systematization. We are presented with a fairly unsystematic expression of a systematic thinker.

The outcome is a philosophical system which in spite of clearly being Platonist and with recognizable Aristotelian traits nevertheless strikes us as innovative in relation to these past masters in several respects. A part of the explanation of this impression is no doubt that Plotinus interprets Plato and Aristotle somewhat differently and at any rate emphasizes other aspects of their thought than is customary today. He was, nevertheless, in spite of his own intentions, one might say, an original thinker. As we shall soon see, some of his innovative ideas have to do with the notion of active power. Before I go into that it is necessary to give the basic outlines of Plotinus' system.

If we were to visualize Plotinus' model of the world, we would arrive at a picture that looks somewhat like a pyramid or even better—because there are layers—a wedding cake.[2] Indeed, it is very common to describe his view of the world as hierarchical. At the top there is the One, also called the Good. It is the simplest or most unified 'thing' there is. It is so unified, in fact, that it contains no distinctions whatsoever. This implies that it is not really correct to call it a 'thing', as I just did: it is 'beyond being' in the sense that there is nothing it can be said to be, nothing that can be predicated of it as such. In this context 'being' presupposes some particular form that limits the being in question, and a limit presupposes distinctions. In this Plotinus follows Plato, in particular the Plato of the *Sophist*: being is indeed one particular form, but it always exists in combination with others: to be is always to be some thing or other. None of this applies to the One, which evades all boundaries involved in predication. So if we in spite of this insist on calling it a thing, we must realize that it is no ordinary thing and in many ways defies the logic of things. It goes together with this view that the One cannot be thought or known: to think or to know something is to think or know what it *is*, to know the being of the thing thought about.

The second level, after the One, is Intellect (*nous*). Intellect is a mind that "thinks all things"—'all things' here being understood as the Platonic Ideas, the prototypes or paradigms of everything else. Since for Platonists the Ideas are all what truly is, Intellect also is the sphere of

[2] On the limitations and possible misleading nature of such visualizations and talk of hierarchies, see O'Meara, "Hierarchical Ordering of Reality in Plotinus".

true being. The third level is Soul, which is the intelligible level directly responsible for the sensible world, both its production and management. These three levels, the One, Intellect, and Soul, are called the three 'hypostases', a term introduced in this sense by Plotinus' student and editor, Porphyry. As a whole, the three hypostases are referred to as the intelligible sphere.

The sensible world is also stratified, though the account of how this takes place is less consistently presented than that of the intelligible sphere. It seems, however, that within this sphere Plotinus distinguishes between levels of ensouled bodies or organisms, forms in matter such as colours and shapes, and matter itself, which is an indeterminate receptacle of sensible forms, itself formless and inert.

It is no accident that the One is so called. The Plotinian 'wedding cake' is simple at the top, and becomes more multiple the further down we go. Unity and plurality are indeed the defining notions of the hierarchy. The One, the limiting notion, is absolutely simple; Intellect has a high degree of unity but it is not absolutely simple, hence, it has a certain definite degree of plurality. Plotinus evidently thought that degrees of unity and plurality are discrete, that they come in definite chunks. Hence the layers in the hierarchy, and hence the wedding cake rather than the pyramid. He sometimes uses fixed formulae, derived from Plato's *Parmenides*, to describe this: thus, the One is said to be 'one' only, Intellect 'one-many', and Soul 'one and many'.[3] Every possible degree of unity (which at the same time is a degree of goodness or perfection) is filled. The One occupies a particular slot, Intellect another, and Soul a third. The same holds for the different levels of the sensible realm.

The kinds of plurality involved in rendering the levels ever more plural vary. Intellect, for instance, is many on account of the difference between a thinker and the object of thought; though being one and the same thing, there is nevertheless a formal distinction to be made between the subject and the object; furthermore, the object of thought itself must be multiple if there is to be thought of it. Interestingly, Plotinus sees time and space as features contributing to plurality. The intelligible sphere is timeless and without spatial separation; plurality in the intelligible sphere consists in there being different things that nevertheless make up a kind of organic unity: the intelligible horse is different from

[3] See Dodds, "The *Parmenides* of Plato and the Origin of the Neoplatonic 'One' ".

the intelligible cat but they are a part of one organic whole. Time and spatial extension are one more way in which things can become more multiple. Time and extension present as separate things that which at the intelligible level is one timeless and non-spatial unity.

Plotinus' account of the different strata within the sensible sphere is less consistently and systematically presented than that of the intelligible sphere. However, the following picture seems to emerge: 1. There are organisms, ensouled beings that are composites of soul and body. These are the most unified items at the sensible level. Actually, the soul, even the kind of soul that ensouls living bodies, does not belong to the sensible sphere. This is shown by the fact that it evades the logic of part and whole that pertains to bodies. Plotinus thinks that evident facts about sense-perception, e.g. that the selfsame soul feels the pain in the finger and in the toe at one and the same time, show that the soul can be as a whole undivided in many places at once, which fact shows that the soul is not of the order of bodies (cf. *Enneads* IV.2; IV.7.6–7). 2. Below the composite of body and soul are sensible qualities such as colours and shapes. In their case, there is indeed "the same form in many" but each instance is individuated along with the mass (body) it inheres in (cf. IV.2.1; VI.4.1). Thus, the white in this part of the milk is indeed different from the white in that other part; they are in a sense different individuals. 3. Mere bodies or masses come next. These differ from qualities in that there is no same form present in many. The idea seems to be that each mass is an unrepeatable individual which in fact provides the principle of spatial individuation (cf. IV.2.1; VI.4.1). 4. Finally, there is matter, the underlying substrate of extension and sensible qualities. Matter itself is without any qualities and it is not to be identified with extension, even if it is easy to confuse it with extension. As such matter has no definite size or extension.[4]

This basic structure was seen by Plotinus to have Platonic foundations. The One (the Good) is primarily based on the 'one' of the first hypothesis presented in Plato's *Parmenides* 137c ff. and on the Idea of the Good in Plato's *Republic*. Though presenting the Good as a kind of cause of the other Ideas,[5] Plato nevertheless seems to think that the Idea of the Good, though supreme, is a genuine Platonic Idea along with the others and that it is knowable. Plotinus denies both these claims with

[4] On matter see especially *Enneads* II.4 and III.6.
[5] Cf. Pietarinen's contribution on Plato in this volume (pp. 18–19).

respect to the One, and in this he presumably deviates from Plato. The fundamental idea of a hierarchy with degrees of unity/plurality comes from the latter part of Plato's *Parmenides*, which Plotinus took to be an ontological or metaphysical work. Plato's *Timaeus* too is a very central work for Plotinus. His notion of Intellect is a combination of Aristotle's notion of God from *Metaphysics* 12, the Demiurge of the *Timaeus* taken together with the Ideas that are the objects of his gaze. The *Timaeus* (35a ff.) is also Plotinus' main source for Soul as a hypostasis and for the basic structure of the sensible world. Without too much exaggeration one could say that Plotinus' grand scheme of things is the result of an attempt to present a coherent view on the basis of these three Platonic dialogues, interpreted his way, of course.

Activity and powers to act

Nothing has been said so far about the 'dynamics' of the Plotinian hierarchy. For everything said so far, one might think that the different levels posited by Plotinus are simply given and are there for all times quite independently of each other. This is, however, not the case. The One is the first principle and ultimate cause of everything else. Itself exists necessarily—and needs no ground external to itself (cf. VI.8.20 cited below). Primarily, however, it is the cause of Intellect, which in turn generates Soul, which again generates the sensible realm. It is true that the generation in question is not a temporal process and, hence, it is, not a question of a 'first' in a temporal sense. Even the generation of the sensible realm is not a temporal event, even if the sensible realm is in time: its cause, Soul, is outside time, even if its product is in time.[6] Plotinus, however, clearly conceives of this as a causal process of sorts. His 'first' and 'second' are, however, said to be such in a sense reflecting ontological priority rather than time. Thus, talk of 'process' should be understood metaphorically here. It is in the account of this generation of the levels from the absolutely simple One that the notions of act and power primarily become relevant.

Plotinus' notion of power is a development of his Platonic and Aristotelian heritage but the result is in some ways quite original. Plato introduced the word *dunamis*, 'power', into the vocabulary of metaphysics.

[6] Cf. *Enneads* III.7.11–12, and Smith, "Eternity and Time".

In a very interesting passage in the *Sophist* 247c ff. he speaks of being as the power to act on something or the power to be affected by something: that which cannot act on or be affected at all cannot be said to be in any way.[7] Aristotle, presumably relying on this passage, also distinguishes between active and passive powers.[8] For Aristotle, power is intricately bound up with the notion of act or actuality, *energeia*. In *Metaphysics* VIII Aristotle argues that the actuality of a thing is to be identified with its existence or being. An actual human being, for instance, is something that exists as a human being. What makes something an actual human being is the *form* of humanity. Thus, the actuality of F is for Aristotle very closely associated with the form of F and with being F in the fullest sense. According to Aristotle, however, there is another way of being F, namely, being potentially F. In general, for Aristotle that which is potentially so or so becomes actually so and so by the agency of that which is already actually so. He often explains this by reminding his readers that it is an actual human being that begets another human being.[9] That which is actually F makes and hence has the form of F acts on that which is potentially and thus has the suitable matter for F, i.e. the passive power of being affected so as to become F. As we shall see, Aristotle's terminology and conceptions here are relevant for understanding Plotinus on acts and powers.

A distinct feature of Plotinus' account of the generation of the hypostases is the notion of double activity. 'Activity' here is the Aristotelian term *energeia* that we discussed in the preceding paragraph. Allusions to double activity are to be found all over the *Enneads* but it is rarely an issue in its own right. The basic idea seems to be that each level in the hierarchy is characterized by a definite kind of internal activity which defines the given level. At the same time, this internal activity produces an effect outside itself. This effect is the external activity. The following passage from *Ennead* V.4 is the closest Plotinus comes to giving a sustained account of double activity:

> When, therefore, the intelligible[10] abides 'in its own proper way of life' [*Timaeus* 42e] that which comes into being does come into being from

[7] On this passage, see Pietarinen (pp. 12–13) and Løkke (pp. 51–52) in this volume.
[8] *Metaphysica* IX.1, 1046a11–13.
[9] Cf. *De generatione animalium* 735a21; *Metaphysica* 1070b34; *De partibus animalium* 640a25.
[10] What is called 'the intelligible' (*to noêton*) in the early treatise V.4—the seventh on Porphyry's chronological list—is what normally is called the One or the Good.

> it, but from it as it abides unchanged. […] But how, when that abides unchanged, does Intellect come into being? In each and every thing there is an activity of the Being[11] [*ousia*] and one which goes out from the Being; and that which belongs to Being is the activity which is each particular thing, and the other activity derives from that first one, and necessarily follows it in every respect, being different from the thing itself: as in fire there is a heat which constitutes its Being, and another which comes into being from that primary heat when fire exercises the activity which is native to its Being in abiding unchanged as fire. So it is also in the intelligible; and much more so, since while it [the first principle] abides 'in its proper way of life', the activity generated from its perfection and its coexistent activity acquires substantial existence, since it comes from a great power, the greatest of all, and arrives at being and Being: for that other is beyond Being.[12]

We see here that double activity operates in "each and every thing". Thus, every level in the ontology, and it seems every natural substance, has an internal activity accompanied by an external one (cf. also IV.3.7, 17). Note further that Plotinus does not merely say that *in* each thing there is an internal activity, he goes on to say that this activity constitutes each thing. The internal activity of each thing constitutes and defines it. In this we see a continuation of the Aristotelian idea that identifies the being of F with the activity/actuality of F.

The external activity from, say, the One becomes a kind of 'matter' for the next stage below, in this case Intellect, which is brought to completion by a conversion (*epistrophê*) towards its source. This conversion, I take it, constitutes the internal activity of the next stage, Intellect, which in turn is accompanied by a new external activity which forms the basis of Soul. Processes of this kind are repeated until we reach matter itself which, on account of the decreasing external power the further down one goes, is quite impotent and thus has no external act.

Plotinus does not use the latter terms for his first principle in this treatise, though he is evidently talking about what he elsewhere calls the One or the Good.

[11] Not entirely happily I have chosen to render *ousia* as Being (with an initial capital) in translations of Plotinus' text. What makes me unhappy about it is that it is not conventional. Both conventional terms, however, 'substance' or 'essence', strike me as potentially misleading. The question may be raised whether it is not important to keep *on* (being) and *ousia* distinct. Plotinus himself after all explicitly mentions a distinction between the two in II.6.1, 1 ff.: being (*on*) is along with motion, rest, identity and difference one of the constituents of Being (*ousia*) which is the totality of these. It is not clear, however, that he endorses this proposal, since he continues to say that e.g. motion in the intelligible world is *ousia*. As Corrigan ("Essence and Existence in the *Enneads*", p. 106) notes, *on* and *ousia* are generally coterminous.

[12] *Enneads* V.4.2, 20–37.

Put in different terms: matter is so plural that there is no possible degree of further plurality; the limit has been reached. So it is not quite true that absolutely everything has an external act even if most things do: matter surely does not. But then matter is hardly anything according to Plotinus: like the One, there is nothing that matter as such can be said to be; it defies form and predication, though for the very opposite reasons to those that make the One defy this. We may gather from this that internal and external activities are somehow the backbone of Plotinus' grand view of things.

In the lines before the quotation from V.4. above, Plotinus says that Intellect is a representation (*mimêma*) and image (*eidôlon*) of the One, and some other passages state explicitly that the external act is an image of the internal one (IV.5.7, 16–18; V.1.6, 33; V.2.1, 15–21; V.3.7, 23–24). This suggests what indeed is the case: the doctrine of the two acts is interlocked with the Platonic doctrine of paradigms and its images: the internal act corresponds to the paradigm, the external one to its image. It should be noted in this context that quite rightly Plotinus does not restrict the application of the notions of paradigm and image to the Platonic Ideas and their sensible instances. Any intelligible cause is seen as a kind of paradigm and its products as a kind of images. We shall see later on that Plotinus presumably thought that the Aristotle-inspired doctrine of double act could be used to underpin the Platonic relationship between a paradigm and its image.

Activity/actuality (*energeia*) is a term of art in Plotinus. His accounts of the processes this term refers to, however, are highly metaphorical. The metaphors Plotinus uses are quite diverse: the One's having an external activity at all is sometimes described in terms of the pregnancy and generative nature of what is perfect,[13] but most commonly external acts are described with the aid of emanative metaphors of overflow (see e.g. V.1.6, 7; V.2.1, 8) or illumination (V.1.6, 28–30; V.3.12, 39–44). We are here faced with the so-called emanation, a notion with which Plotinus has become strongly associated. As a matter of fact, however, talk of emanation is metaphorical. Talk of fire heating, springs overflowing

[13] Cf. *Enneads* V.1.6, 37–38; V.2.1, 7–9; V.4.1, 23–31. Plotinus' view that what is *teleion* produces something like itself no doubt claims Platonic authority in *Timaeus* 29e, the celebrated passage about the God's ungrudging nature (cf. V.4.1, 34–36). Plotinus may also draw on Aristotle here, who says that a living being that is *teleion* reproduces (*De anima* II, 415a26–28). The sense of *teleion* here, however, is presumably 'mature' rather than 'perfect'.

and so forth is at best suggestive but does not describe the metaphysical case accurately. For instance, the One, in having the external activity it has, loses nothing of itself.

In our passage we see a typical emanation analogy, that of fire, which the context shows to be just that, an analogy or illustration through something similar and familiar: the internal act is supposed to correspond to the native heat in the fire itself, whereas the external act corresponds to the heat surrounding the fire (cf. II.6.3, 16 ff.; V.1.3, 9–10; 6, 34; V.3.7, 23–24). Elsewhere there are similar analogies in terms of cold, smell and light (IV.5.7; V.1.6, 34–37). A particularly interesting metaphor Plotinus sometimes uses is that of leaving a trace (*ichnos*). It is interesting, firstly, because, more clearly than the other metaphors, it preserves a connection with the Platonic talk of images and image-making, *ichnos* being one of several Platonic terms of a secondary ontological status. Secondly, I find it interesting because this metaphor illustrates some features of Plotinus' thought about double activity particularly conspicuously.

Plotinus often remarks, though not here in V.4.2, that the external act depends on the internal one (cf. e.g. I.7.1, 26; I.8.2, 3; IV.5.7, 40; V.3.8, 14) or that it is not 'cut off from' the internal one (I.7.1, 27; V.2.1, 13–22; V.3.12, 44; VI.2.22, 33–35; VI.4.3, 8–10; cf. VI.4.9–10). By this he wishes to make the point that in spite of being 'in something else', the external act still depends on the internal one: should the internal one cease to be, so would the external one, just as a mirror image depends on the mirrored object and is not 'cut off' from it (cf. VI.4.9, 36–VI.4.10, 30). The expression 'not cut off from' comes from Aristotle (*Physica* III, 202b8) who uses it to make the same or a similar point: even if the activity of an agent is in the patient that is different from the agent, the activity is not 'cut off from the agent'; it is a case of one thing acting in another.

The cause, the internal activity, is not changed and loses nothing by acting. In V.4.2 Plotinus expresses this by saying as he often does elsewhere that the cause 'remains' or 'abides' (*menei*). He may also say much to the same effect that it does not leave itself (*apoleipein*) (cf. V.1.2, 9; VI.4.2, 15; 8, 28; 11, 5–6) or that it in no way is diminished (*elattousthai*) (VI.9.5, 37). A complement to the point about the cause's abiding unchanged is the view of the internal act as self-contained. As he puts it in V.3.7, 18–19: "The being [of Intellect], therefore, is activity, and there is nothing to which the activity is directed; so it is self-directed." In the continuation of this remark he says that what is to

have external acts must first be 'in itself', the implication obviously being that in spite of being self-directed (self-contained), an external act nevertheless follows. So the internal act is not self-contained in the sense that it has no effects outside itself. This, however, is puzzling and raises interesting questions about the exact relationship between the internal and the external act.

So how can Plotinus maintain both that the internal act is self-contained and that it has an external effect? Does it not look as if he is saying that the internal act is left to itself and at the same time has an effect outside itself? In order to become clearer about this, let us consider one of Plotinus' metaphors for the two acts. He fairly often describes the external act as a trace (*ichnos*) of the internal one. On one occasion he suggests that the internal act can be compared with walking.[14] I believe this example can be used to shed light on the relation between the two acts. Walking and leaving a trace by walking involve only one exertion: in so far as his exertion is concerned, the walker does nothing in addition to walking in order to bring about the trace. Nevertheless, walking and the making of the trace can be considered to be two acts: they have different descriptions and the relevant terms have different meanings.

Furthermore, walking is an example of what Plotinus calls an absolute (*apolytos*) activity. By calling it absolute, he means that it is non-transitive, i.e. self-contained: to say that something walks is not *eo ipso* to imply agency on something outside the walker. It is also clear, however, that being absolute does not prevent an activity from having an external effect. It is just that it does not need this external effect in order to be what it is: we can understand walking without appealing to traces, indeed walking can be there without leaving any traces at all. In that sense walking is independent of making a trace. The converse, however, does not hold: traces depend on walks and cannot be properly understood without them. It is true that epistemically speaking we often encounter the traces first and they can reveal to us a great deal about their cause: where the walk went and perhaps in addition interesting things about the agent: about his weight, the number of his legs and toes, and so forth. So there is a relation of dependence here.

[14] See *Enneads* VI.1.22, 26–34, and Emilsson, *Plotinus on Intellect*, chapter 1, section 5.

This brings us to another issue. It is not the case that all effects of an internal activity qualify as external acts of that activity. A walk, for instance, may result in a bad knee or in finding a treasure in the forest. Neither fact, however, would qualify as an external act of the walk. As we saw in the passage cited at the outset of this discussion, Plotinus' own word for the internal and the external act are actually "activity of the Being [*ousia*]" and "activity from the Being", respectively. This suggests that though different from the essence in question, the activity from the essence reflects the essence. This is indeed just what we should expect on other grounds: the two activities correspond to the Platonic relationship between paradigm and image, the external act being in the place of the image. So it should indeed reflect its cause and bear a certain resemblance to its cause, however inferior it is bound to be.

To summarize, we may say that the external act resembles its cause. It is a bleak resemblance, however. It depends on its cause for its permanence and is in its nature a kind of offshoot from it. It will last only so long as the source continues in its internal activity. The internal act is absolute, i.e. self-contained, whereas the external one is an effect the internal one has outside itself, like a trace from a walk. In this Plotinus' external acts differ from typical Aristotelian agency. For Aristotle Man begets Man, the agent and the product being on the same ontological level. For Plotinus, by contrast, the external act involves a weakening. Thus, Plotinus can identify the external act with an image in Plato's ontological sense.

As the preceding account suggests, internal activities have the power to produce something else. Indeed, as a cause of the external activity, the internal act may be called the power (*dunamis*) of that activity and Plotinus refers frequently to it in this way. In this connection it is important to note that Plotinus wishes to distinguish sharply between active and passive powers, between the power of something and being potentially something (II.5.1, 21–37; cf. VI.8.1, 11–13). He suggests in II.5.1 that in referring to the latter kind of power one should stick to the adverbial dative, *dunamei* (potentially), and reserve the nominative *dunamis* to the active kind. As Christian Tornau observes, Plotinus, however, does not consistently stick to this proposal.[15] So *dunamei*, 'potentially', at least when used of the intelligible realm, usually implies

[15] Tornau, "Wissenschaft, Seele, Geist: Zur Bedeutung einer Analogie bei Plotin (*Enn*. IV 9, 5 und VI 2, 20)", n. 63.

power in the sense of power to act. It is this sense *dunamis*, the power to do something, is also an activity. Or conversely, any genuine activity is also a power to do something. This latter formula is equivalent with the claim that anything perfect begets.[16] The power in such cases is a power to do its external act. The power so described, however, is not the external act itself. It is the internal act but referred to as the productive cause of the external one. The power would not be a power to do anything of the sort unless it at the same time was an internal activity in its own right. At the intelligible level at least, the external act is brought about by strict necessity.[17]

An instance of this sort of use is to be found in Plotinus' description of the One as the *dunamis pantôn*, the power of all things, i.e. the power to make all things (V.1.7, 9; V.3.15, 31–32; V.4.2, 38). The idea behind this phrase is of course not that the One is potentially everything in the sense in which matter may be said to be potentially everything, nor is he saying that the One is first actualized when it makes the things of which it is the power, as if it only then would have made itself complete. The idea is rather that the One is a kind of activity in its own right in virtue of which it is the power of producing all things, properly so called. Though Plotinus may not say so in so many words, it is difficult to resist the thought that Plotinus foreshadows Spinoza in holding that the active power other things may have is part of or a specification of the active power of the One, so that each thing is a particular kind of modification of the power of the One.[18]

As is clear from what has already been asserted, Plotinus insists on the primacy of activity. Before the internal act can produce something outside itself, it must be an activity in its own right from which the external act flows without any special effort on the part of the internal agent. Behind this view there is the general causal principle already mentioned and shared by Plato and Aristotle: The Principle of Prior Actuality. According to this principle what is potentially F becomes actually F by the agency of something that already is actually F. But, as already noted, the produced F is an F in the sense of an image of F. The process involves a loss.

---

[16] Cf. n. 13 above.

[17] Cf. the quote from *Enneads* V.4.2 above (pp. 76–77).

[18] Editors' note: For more on Spinoza's monistic view of power, see chapter nine in this volume.

There has been considerable speculation and disagreement about the sources of Plotinus' double act doctrine: the Stoics, Aristotle, and Plato have all been mentioned. I shall not relate the pros and cons of this debate here.[19] Let it suffice to state here that I take the doctrine to contain both Platonic and Aristotelian elements. The central notion, activity, *energeia*, is of course Aristotelian, but this Aristotelian notion is somewhat revised and integrated into what Plotinus saw as a Platonic view. The Aristotelian Principle of Prior Actuality and Plotinus' modification of it has already been mentioned. This principle, however, seems to be implicit in Plato too, e.g. in the view that the Ideas are self-predicational: the Idea of Man is somehow itself a man. Plotinus' modification, which emphasizes the inferior nature of the external act, is in the direction of Plato. Furthermore, despite his allegiance to the Principle of Prior Actuality, in certain respects Aristotle, as opposed to Plotinus, may seem to hold a dispositional view: while Plotinus insists that a productive power must also be an actuality/activity in its own right, Aristotle thinks that capacities, which are a kind of powers, are actualized in the patient which always is different from the agent. So here the actualization occurs in something else—the actualization of the teacher's capacity to teach takes place in the pupil. In these cases, Aristotle at least does not emphasize the necessity of prior activity/actuality from which the exercise of the capacities arises as Plotinus does.[20]

I shall refrain from going into details and state, dogmatically, that the double act doctrine is Plotinus' interpretation of Platonic causality. I take it that he sees elements of this doctrine in various Platonic passages.[21] At the same time he reads Platonic passages in the light of this doctrine. In particular cases it is not easy to judge whether he is interpreting Plato from the perspective of the double act doctrine or seeing confirmations of it in the passages he invokes or alludes to. The crucial points about the notion of causality involved are the following: Platonic causes are something in their own right quite independently of their effects. They can be studied and understood (except of course in the case of the One,

[19] Armstrong ("'Emanation' in Plotinus") and Hadot (*Porphyre et Victorinus*, p. 229) have for instance suggested Stoicism, Rutten ("La doctrine des deux actes dans la philosophie de Plotin") and Lloyd ("Plotinus on the Genesis of Thought and Existence", pp. 167–170; *The Anatomy of Neoplatonism*, pp. 98–101) Aristotle, and Gerson (*Plotinus*, pp. 23–24) Plato.

[20] Cf. Tornau, "Wissenschaft, Seele, Geist: Zur Bedeutung einer Analogie bei Plotin (*Enn*. IV 9, 5 und VI 2, 20)", and Emilsson, *Plotinus on Intellect*, pp. 199 ff.

[21] See Emilsson, *Plotinus on Intellect*, chapter I, section 8.

which is beyond knowledge) in themselves without recourse to their effects; this is, however, not to deny that our route to the causes must start from the effects. Here I am not merely thinking of the Platonic Ideas but also of such causes as the Demiurge in the *Timaeus*, the soul in the *Phaedrus*, souls as the causes of external actions in the *Republic*. The causes are such that the effects become intelligible in their light: if one knows the causes, one understands that their images are such as they are. Furthermore, the causes, which as already noted have 'their own life', as it were, do not have to do anything in addition to being what they are in order to bring about their effects, their images: these effects flow from them, from their superabundance, as it were. Hence, the causes are not in any way reduced or affected by having the effects they have (cf. *Symposium* 212b).

The One as the productive power of everything

As noted earlier, the One is the sole first cause of everything in Plotinus. Plato, Aristotle, the Stoics, Neopythagoreans, and Plotinus' Platonist predecessors seem to have been pluralists or dualists in proclaiming at least two independent principles. Leaving Parmenides aside, he may well have been the first major monist in the Western philosophical tradition. In all of these other thinkers there is a distinction between what may be labelled a formal principle and a material or receiving one, and these are independent of each other. For Plotinus too, a distinction between the formal and the material plays a significant role, but he nevertheless is in an interesting sense a thoroughgoing monist: everything, including matter, has the One as its source. It is just that the One provides both the formal and the material aspect of other things. How does this happen? By 'overflowing', the One makes something different from itself. This offshoot from the One ('the material aspect'), feeling a certain lack at no longer being perfect, yearns for the One and seeks to have it in an intellectual vision. The One, however, is not the sort of thing that can be grasped. So what appears to the offshoot of the One is at once itself and an appearance of the One (to be distinguished from the One as it is in itself). This is the story of the generation from the One in its barest outline.

This account gives rise to several problems and questions. It is beyond the scope of this chapter to address them fully but in what follows I shall raise some questions and give some hints of answers. As noted earlier,

Plotinus thinks the One is totally simple and as such it neither can be grasped by thought nor does it think itself (for thinking implies plurality). Given that this is so, how can he attribute an internal activity to it? How can a totally simple thing be engaged in activity? Well, Plotinus is not quite consistent in attributing activity to the One. Sometimes he denies that it acts for the very reason suggested by our question (I.7.1, 17; V.3.22). His considered view may be that strictly speaking we cannot attribute activity to the One, but if we were *per impossibile* forced to describe the One, if we were to say what cannot be said, we would attribute something like internal activity to it; this is, however, an 'as if' attribution. In fact, nothing we say about the One as it is in itself as opposed to its effects can be applied to it strictly, in every case the One is at best only *as if* so and so. In a very interesting passage, where Plotinus is engaged in this sort of 'as if' talk about the One, he raises the question whether the One makes or creates itself. He notes that "if [the One] makes [*poiei*] itself, it *is* not yet, in so far as it is the object of the making; but in being the maker, it is already before itself, since itself is the product" (VI.8.20, 2–4). To this he responds:

> Against this it must be said that [the One] is not to be ranked as product but as agent; we hold that its making is absolute [*apolytos*], not so that something else should be accomplished from its making, as its activity does not aim at accomplishing a product, but it is entirely it.[22]

So the One's activity is like walking in that it does not as such have an external object. It is also fairly clear that even if Plotinus employs the word 'activity' (*energeia*), the activity in question is not meant to be something that involves an internal change. In fact the word 'activity' does not have such an implication in Plotinus' use. He, for instance, is quite willing to speak of e.g. snow or a drug as having an internal activity in virtue of which they have external effects, viz. cooling and curing, respectively (V.4.1). By this he is not implying that the snow or the drug undergo internal changes in order to bring this about. The One is the cause of everything else just by being what it is.

Another question pertains to actuality and potentiality in relation to the One. We mentioned above the Principle of Prior Actuality. According to this principle, everything caused is caused by something which is actually such as the effect. For Platonists, the cause in fact generally

[22] *Enneads* VI.8.20, 4–8.

possesses the feature it causes in a superior way. Should we then not expect the One, the cause of everything, to be actually and supremely everything? This, however, does not seem to be Plotinus' view. He insists that the One is not actually anything even if it is the power of everything. So it may seem that the Principle of Prior Actuality does not hold here. Not everything, however, is quite as it seems here. It is true that the One is not any being, actually. It may still be the case that the internal activity/actuality of the One is the prior actuality (or as-it-were-actuality) of which Being and beings are external products. In this case the principle of prior actuality would be preserved, at least in a way. It is just that cause and effect do not share a name in this case. Being and beings are the lower manifestations of something that is really beyond naming.

When Plotinus says that the One is the power of everything (V.1.7; V.3.15; V.4.2), he does not mean to suggest that the One is potentially everything in the way matter is. Matter is potentially everything in the sense that it can take on any form but possesses no form by itself. Thus, in the case of matter it is a question of passive power. The One, by contrast, is potentially everything in the sense that it is the power of producing everything, every form, every being is a product of its internal activity. Perhaps one could say, though this is not Plotinus' manner of speaking, that 'potential' in this sense amounts to 'actual', because the One does not contain any unrealized possibilities. This would, however, be a sense of 'actual' that is incompatible with its being 'actually this' in distinction or opposition to 'actually that'.

Another question that arises concerns the trace metaphor Plotinus often uses and which I relied heavily on above in expounding internal vs. external activity. Someone might object to this by pointing out that the relationship between walking and leaving a trace cannot be used as a model for expressing the generation of the hypostases, because the former presupposes some matter on which the trace is made. In the case of the generation of Intellect from the One this is particularly conspicuous. Even if the One is not temporally prior to Intellect, it is causally prior, and Plotinus can in any case not avoid telling his story about the generation from the One in the temporal language of events. 'Before' the One makes the trace which turns into Intellect, there is absolutely nothing. How can one make a trace on nothing? Leaving a trace when walking presupposes sand or some other pliable matter onto which the trace is made. In the case of metaphysical generation there is no antecedent matter or recipient on which to leave a trace.

We might think that the emanative metaphors of overflowing or heating or cooling fare better in this respect. These may seem not to presuppose pre-existing matter in the same way as leaving a trace does. Such considerations may well play a part in Plotinus' fondness of emanative metaphors and analogies. Indeed the emanative metaphors are more apt than talk of traces for capturing just this aspect of the metaphysical causation. This is not to say, however, that the emanative metaphors manage to do full justice to the case. For just like any other physical metaphors these metaphors presuppose a notion of space: we are asked to see the cause as a limited physical object which emits something of itself into its surroundings. We cannot conceptualize this without picturing the source along with its surroundings. This, however, is already too much: not only is the One not an item in space, it cannot be anything like that at all. Might it be an item which by its 'emanation' creates 'intellectual space', as space itself is said to have been created by Big Bang according to recent cosmological theories?[23] So it is not the case that the One is as if located at some point in space from which it emanates something into this space; rather, in emanating it makes the space at the centre of which we tend to picture it. Well, something like that may well be the right picture. If so, however, none of the physical metaphors, including the emanative ones, is quite apt to capture the nature of the case.

These considerations raise deep and intricate questions about the very meaning of Plotinus' language. Given the supposed non-physical, non-spatial and non-temporal nature of the One (or for that matter of Intellect), what can it mean to say, for instance, that it 'overflows'? It is not just that this is a metaphor, which in itself is perfectly fine. The problem is that we are at a loss in relating the metaphor to the object it is applied to.

[23] Cf. Holladay, "Expanding Space".

CHAPTER FOUR

POWER AND ACTIVITY IN EARLY MEDIEVAL PHILOSOPHY

Tomas Ekenberg

> *Si enim uoluit et non potuit, infirmus est. Si potuit et noluit, inuidus est.*
>
> Augustine, *De diversis quaestionibus LXXXIII*

Introduction

Discussions about power in the early medieval period were in general provoked by certain theological concerns. It was held that the ultimate cause of all being and becoming is one unique, supremely good, supremely rational, and supremely powerful being. The world is created from absolutely nothing and is at all times sustained in its existence by God. The view had some attractive consequences as it ensures that the world is—ultimately, and whether we see it or not—orderly, intelligible in principle, and a good place. The view is however also accompanied by some very difficult puzzles, most notably a particularly knotty and metaphysically charged version of the problem of evil.

In his *Confessions*, Augustine famously describes how his initial failure to come to terms with Christian credos such as God's omnipotence and omnibenevolence against the background of his own experiences of a world abundant of imperfection long held him back and delayed his conversion. Apparently, his later encounter with Platonism led to an epiphany, and a Platonist approach to the problem of evil facilitated his wholehearted embrace of the faith. The details of the position arrived at are not however altogether clear from a philosophical point of view, and generations of thinkers would revisit the issues involved.

Discussions about power (*posse, potestas, potentia*) in the early medieval period centred primarily on questions dealing with divine power, but questions about human powers, and the notion of power in itself,

were prompted by questions about the origin of evil, the nature of human free will, and the relation between free will and grace. In this paper, I will look primarily at three medieval thinkers, Peter Damian (c. 1007–1072), Anselm of Canterbury (1033–1109), and Peter Abelard (1079–1142). These thinkers, working at a time when Aristotle's works on physics and metaphysics had not yet been made available, inherited from Augustine and Boethius a certain action-theoretical understanding of power which plays a central role in their accounts of the powers of God and of human beings, and the connected issue of the nature of possibility.

Peter Damian on divine power and will

In his letter 119, *De divina potentia*, Peter Damian argues among other things that God can do at least some of those things he does not will (*vult*) to do. The occasion for the letter is a disagreement between Damian and Abbot Didier of Monte Cassino, to whom the letter is addressed. When discussing a passage of St. Jerome's, where Jerome claims that God is unable to restore virginity in a woman that has lost it, Didier had been inclined to agree, while Damian thought such an inability would constitute an unacceptable limitation of divine omnipotence.

The issue could be said to turn on a disagreement on the relative scope or extension of God's will and God's power. Didier had defended Jerome's claim by arguing that the sole reason God cannot do it, is that he does not will to do it.[1] Damian finds this view untenable, and thinks it leads to an absurd conclusion:

> I say, if God can do nothing he does not will to do, and he does nothing except what he wills, therefore, he can in no way do any of those things he does not do.[2]

Damian's argument is not valid as it stands. If we treat the first two clauses as premises, we get:

> (1) If God does not will to do x, then God cannot do x.

---

[1] Peter Damian, *De divina omnipotentia* 596D–597A.

[2] *De divina omnipotentia* 597A: "[S]i nichil, inquam, potest Deus [facere] eorum quae non vult; nichil autem, nisi quod vult, facit; ergo nichil omnino potest facere eorum quae non facit." Unless otherwise indicated, all translations are my own.

(2) If God does not will to do x, then God does not do x.
(3) If God does not do x, then God cannot do x.

In order for the inference to go through, the converse of (2) is required. The conclusion follows straightforwardly from premise (1) paired with the premise that

(2') If God does not do x, then God does not will to do x.

Is it reasonable to attribute (2') to Damian and also to Abbot Didier? I suggest that it is, and this for reasons apart from mere interpretational charity. For the claim (2') that God does not will to do what he does not do and its counterpositive that whatever God wills to do gets done can be readily established by introducing some basic Augustinian-Boethian notions that without doubt are part of the theoretical framework of early medieval discussions of divine power in general, and of Damian's discussion in particular.

In *De spiritu et littera*, Augustine clarifies the notion of power (*potestas*) in relation to the notions of will and action. The context is a discussion about the power of human beings with respect to morally good action and their bringing about their own salvation. Augustine claims that a human being may have the will to do something but lack the power, as well as have the power to do something but lack the will. He then puts forward a definition of power: "We call that power [*potestas*] where will is accompanied by a faculty of doing [*facultas faciendi*]. Hence, someone is said to have in his power that which, if he wills it, he does, and if he doesn't will it, he does not."[3] In the same vein, Boethius (in the voice of Philosophia) says in the *Consolation of Philosophy*:

> The execution of any human action depends on two things, namely, will and power; if either is lacking, nothing can ensue. For without the will, a person does not even attempt that which he wills not, and if the power is lacking, the will is in vain. Therefore, if you see that someone wills to secure something but fails to do so, you cannot doubt that his power was deficient in obtaining what he willed.[4]

[3] Augustine, *De spiritu et littera*, 31, 53: "Quid igitur ultra quaerimus, quando quidem hanc dicimus potestatem, ubi uoluntati adiacet facultas faciendi? Unde hoc quisque in potestate habere dicitur, quod, si uult, facit, si non uult, non facit."

[4] Boethius, *The Consolation of Philosophy*, 4, prose 2.

Now against the background of such an understanding of the relation between power, will and action, the difference between God, who is all-powerful, and human beings, who are not, is that while human beings may find themselves willing yet unable to do something, and thus end up not doing what they will to do, God never suffers from this sort of impotence. Whatever God wills to do, he can do, and also does. This understanding of what divine omnipotence at least minimally involves is reflected in a passage from the *Book of Wisdom*, which Damian cites: "But thou, mastering thy power, judgest with equity, and orderest us with great favour: for thou mayest use power when thou wilt."[5] The *Wisdom* principle that God's will is always accompanied by power and Augustine's definition of power together entail the premise (2') for Damian's argument. I submit that the notion that if God wills something, he has the power to do it, as well as the notion that if God wills something, then it indeed gets done, are both features of Damian's basic understanding of divine omnipotence, and that this very likely holds for Didier too. The latter is required if Damian's argument against Didier is to have any force.

The disagreement between Damian and Didier is not over whether God's willing something entails his having the power to do it, nor again whether God's willing something entails his doing it, but over whether, necessarily, if God has the power to do something, he wills it. Damian appears to assume—reasonably, it seems—that in order for Didier's explanation of God's inability with respect to restoring virginity to have any force, his explanation must be read as a general principle: for any action under consideration, God cannot do it if he does not will to. From this it follows God can do only those things he wills to do. But if this is true, the range of actions in God's power and the set of actions that God (actually) wills collapse into one and the same set of actions. Further, given the assumption that whatever God wills to do gets done, all three, i.e., what God does, what God wills, and what God has in his power to do, turn into completely coextensive expressions.

Damian does not completely reject Didier's explanatory schema, however. He rejects its universal applicability. In the case of evil actions, Damian is ready to offer a statement of the nature of God's will as the explanation for God's not being able to perform them:

---

[5] *Book of Wisdom* 12.18, quoted in Damian, *De divina omnipotentia* 599A (King James translation).

> That God is said [in the Bible] to be incapable of evil or that he does not know [evil] should not be referred to ignorance or impossibility, but to the rightness of his everlasting will. For because he does not will evil, it is rightly said that he neither knows nor can [do] something evil.[6]

Further, Damian, following Augustine, invokes the Neoplatonic view that evil is merely a privation of good, and that, strictly speaking, what is evil does not and cannot exist, and that what is evil, therefore, cannot be brought about by any power. Claiming that God is omnipotent, that he can do anything, does not entail or require that he be capable of doing what is evil. For what is evil is not anything, but nothing:

> For that which is evil should be called nothing rather than something, and therefore nothing prevents us from saying that God can do everything although he cannot [do] evil things, since the evil things should not be counted among all the things there are, but rather as being extraneous to [the things there are].[7]

When what is at issue is something evil, then, it is according to Damian correct to assert that God is unable to do it, though the inability here should not be considered a form of impotence. Therefore, the inability in question does not diminish divine omnipotence. However, according to Damian, restoring virginity is a good thing, and this is what drives Damian's critique of Jerome's claim and of Didier's alleged defence of it.[8] Damian thinks that if God does not restore virginity in a woman, then this is because God does not will to do so, but this does not mean doing so would not be in his power. There are things—good things—which God can do but does not because, while able to will, he does not will to do them.[9] Consequently, and as Toivo Holopainen has argued, Damian can be said to offer a dual definition of divine omnipotence—as God's power to do (or bring about) anything that is good, and as God's power to do anything he can will.[10] Since God can only will what is good, the two definitions come to the same thing.[11]

---

[6] *De divina omnipotentia* 598D–599A.
[7] *De divina omnipotentia* 610C–D.
[8] *De divina omnipotentia* 599C.
[9] *De divina omnipotentia* 600A–B.
[10] See Holopainen, *Dialectic and Theology in the Eleventh Century*, p. 14.
[11] In his letter, Damian goes on to explore whether restoring virginity involves changing the past, and the more general issue whether God has the power to undo what has been done. For a recent discussion, see Holopainen's "Peter Damian".

In order to see a few ramifications of Damian's view, it is instructive to contrast it with Peter Abelard's discussion on the same topic. Less than a hundred years after the composition of *De divina omnipotentia*, Abelard argues explicitly and quite elaborately for the very position Damian charges Didier with.

Abelard on goodness and rationality

In the third book of the late work *Theologia 'scholarium'*, Abelard boldly argues that God is only able to do what he in fact does while admitting that "this opinion of ours has few or no supporters and it seems to disagree with the statements of most saints and a little bit with reason as well".[12] What makes Abelard adopt the view nonetheless are certain considerations about goodness and the will.

Abelard agrees with the traditional view that God cannot sin and cannot will anything evil, and yet that God's being unable in this way entails no kind of impotence. God is also unable to do many things human beings are able to do, such as walking, and again, no impotence should be derived from this. After some preliminary arguments, Abelard concludes that "God is not said to be capable of everything because he can undertake all actions, but rather because in all cases whatever he wills, nothing can resist his will".[13] For this view, Abelard cites Augustine, and since nothing is said explicitly about God's power with respect to the things God does not will and does not do, the claim can be said to be neutral with respect to the two positions Damian outlines in his *De divina omnipotentia*, i.e., Damian's own position, and the one purportedly espoused by Didier.

The key claim of Damian's account of omnipotence is the claim that there are things God can do but which he does not will to do. In other words, Damian insists that the things God *can* will to do are not exhausted by the things he in fact wills to do. Abelard, in his discussion in *Theologia 'scholarium'*, quickly homes in on exactly this issue and puts the question in the light of the doctrine of God's supreme good-

[12] Abelard, *Theologia 'scholarium'* 3:46.
[13] *Theologia 'scholarium'* 3:21.

ness: can God do more or better things than he does or omit doing what he does?[14]

According to Abelard, a good action is an action done for a valid reason.[15] Because God does only what is good, he does only that for which there is a valid reason. Further, if there is a valid reason to perform an action, there cannot be a valid reason to omit it, and if there is a valid reason to omit an action there can be no valid reason to perform it. Finally there can never be a valid reason to both do and omit doing something. Therefore, whatever God does, he could not have omitted doing, since this would not have been a good thing to do, and, conversely, whatever God omits doing he could not instead have done.

There are some very powerful assumptions at work in the argument. In Abelard's picture, what is fitting for (*convenit*) God to do, what is good for God to do, what is right for God to do, and what God ought to do all come to the same thing.[16] Further, he identifies good action with action done for a valid reason, and so what is right and good is also what is rational. Finally, he applies a version of the principle of sufficient reason to God's activity, a principle in favour of which he cites a passage from the *Timaeus*: "All that is brought forth is brought forth as a result of some necessary cause. For nothing happens the origin of which is not preceded by a legitimate cause and reason."[17] Now Abelard's understanding of the legitimacy or validity of a reason is incompatible with the possibility of moral indifference. If there is a valid reason to do something, then there cannot be a valid reason not to do that thing, and there cannot be a case where there are equally valid reasons to do two or more alternative things, since in doing one of them, one would have to omit doing something for which there was a valid reason, and so omit something one should not omit:

> Certainly everything which it is just that it be done it is unjust that it be omitted, and whoever does not do that which reason demands errs just as much as if he did that which does not agree with reason at all.[18]

---

[14] *Theologia 'scholarium'* 3:27.

[15] *Theologia 'scholarium'* 3:32.

[16] See especially *Theologia 'scholarium'* 3.35. Also, cf. Marenbon, *The Philosophy of Peter Abelard*, p. 219.

[17] Plato, *Timaeus* 28a (in Calcidius' Latin translation) quoted by Abelard in *Theologia 'scholarium'* 3:31: "Omne quod gignitur, ex aliqua causa necessaria gignitur. Nichil enim fit cuius ortum non legitima causa et ratio precedat."

[18] *Theologia 'scholarium'* 3:35.

As Anthony Kenny notes, Abelard's account of the nature of the morally good action commits him to holding that there is at each juncture only one action which is right and morally obligatory.[19] God's actions are thus necessary in the sense that there is for him at no time some alternative course of action open to him. In a word, Abelard does not believe in any liberty of indifference in God, because he thinks such freedom is incompatible with God's supreme benevolence and rationality.[20]

Damian defined divine omnipotence as God's ability to do whatever he can will, and to do whatever is good. One way of highlighting some features of this position is to compare it to Abelard's views on the connection between the goodness of things and the willings of God. According to Abelard, God does only good things, and *wills* to do these things because they are good. This is clearly Damian's view too, so both appear to be hanging on to the same horn of the *Eutyphro* dilemma: the standard of goodness must in some sense be independent, and explanatorily prior, to God's will.[21] It is however equally clear that Damian would not agree with the Abelardian notion that each thing God does is good in the precise sense that there is a valid reason to do this thing and no other. In Damian's picture there are good things which God could will because they are (or would be) good but does not. And so the question is what Damian's conception of moral goodness amounts to. Damian cannot define goodness in terms of God's will, for whether or not this would commit him to a vicious circle this move would immediately render his definition of divine omnipotence unintelligible. Regretfully, Damian does not address this issue directly in his letter but seems to be relying on intuitions or appealing to common sense, according to which things such as the restoration of virginity *just are* good things.[22]

At any rate, Damian's insistence on there being things God could will but does not will makes it possible to substantiate an argument for ascribing a *liberty of indifference* to God. Further, it shifts the focus from the action to the will as the true locus of divine power, since at least

---

[19] Kenny, *The God of the Philosophers*, p. 115.

[20] See especially *Theologia 'scholarium'* 3:37.

[21] Abelard explicitly rejects the view that God does what he wills simply because he wills it. Rather God wills and does what is good because it is good. See *Theologia 'scholarium'* 3:33.

[22] For instance, Damian thinks that the good things God might do include, though are not exhausted by, the things that are good *for* human beings. See especially *De divina omnipotentia* 599C–600A.

sometimes God would have done otherwise, had he *willed* otherwise, which on Damian's account he could have. And so he can be read as putting forward a kind of theological voluntarism, though one which does not necessarily entail a divine command theory: the way the world unfolds is certainly a matter of the will of God, but the goodness and badness of the things involved may not be, in which case God's options are not unlimited. In any case, we have some theoretical backing for thinking that things could have turned out otherwise than they actually did, and that there are, or at any rate can be, unrealized possibilities. Implicitly, thus, Damian's account of divine omnipotence constitutes a rejection of the statistical, or temporal-frequency, interpretation of possibility, according to which a state of affairs is possible if and only if that state of affairs is actual at some point in time. Employing the statistical interpretation of possibility in assessing God's power is tantamount to saying that God can only do what he in fact does at some point in time. As we have seen, Abelard asserts this, whereas Damian does not.

Challenges to the statistical interpretation can be found already in Augustine.[23] At the very beginning of *De spiritu et littera*, Augustine tells us that Flavius Marcellinus, the addressee of the work, had questioned Augustine's claim that human beings can be perfectly just although no single example of a perfectly just human being is to be found in this life apart from the God-man. Augustine argues in response that there are many things that could be but are not and in particular many things God could have done but did not do, such as sending twelve thousand legions of angels to rescue Jesus from his suffering.[24] He appears thus to place unrealized possibilities in the domain of God's power particularly, which raises the question whether or to what extent justice is in a human being's power as opposed to God's. Such questions were in the early medieval period considered to belong to the topic of freedom of choice, *liberum arbitrium*, and here too, both the notion of power and that of will play major roles.

[23] Cf. Knuuttila, *Modalities in Medieval Philosophy*, pp. 67–68.
[24] *De spiritu et littera* 1, 1.

Anselm on partial powers

In his dialogue *De libertate arbitrii*, Anselm defines the freedom of choice that both God and creatures have as "the power to preserve rightness of will for the sake of that same rightness". He is led toward this definition of freedom—rather than a more traditional one such as freedom as a power to act well or badly—partly by certain ethical and theological commitments, partly by his understanding of the nature of powers in general.

According to Anselm, moral goodness or righteousness, *iustitia*, is to be identified with the rectitude or rightness of will. In *De veritate*, a dialogue written around the same time as *De libertate arbitrii*, Anselm distinguishes between rightness of action, of knowledge, and of will, and defines *iustitia* as "rightness of will preserved for its own sake".[25] Correct belief and correct action are on Anselm's account if not irrelevant to, then at least insufficient for, righteousness. Consequently, a definition of freedom as a power to act well or act badly will not do. If Anselm were to try and capture the gist of such a definition he would at least want to say that freedom is a power to *will* well or badly. His view that freedom is a power (*potestas*) and certain assumptions about what it involves for something to qualify as a power prevents him from doing so, however:

> TEACHER. Which will seems to you to be freer: that which wills and is able not to sin in such a way that it in no way can be bent away from the rightness of not sinning or the one that can in some way be bent towards sinning?
>
> STUDENT. I don't see why the will that is capable of both is not the freer one.
>
> TEACHER. Don't you see that the one which holds what is appropriate and what is expedient in such a way that it can't lose it is freer than the one which holds it in such a way that it can lose it and be led to what is unsuitable and useless?
>
> STUDENT. I think that this is doubtful to none.
>
> TEACHER. You would say that this too is indubitable: that to sin is always unsuitable and useless?
>
> STUDENT. No one of a sound mind deems it otherwise.

[25] Anselm, *De veritate* 12; S, p. 194: "Iustitia igitur est rectitudo voluntatis propter se servata."

> TEACHER. Consequently the will that can't deviate from the rightness of not sinning is freer than the one that can abandon it.[26]

Freedom is here spoken of in a way that makes it sound like physical strength. The stronger a grip a person has on the things that are seemly and serviceable, the freer she is. The argument gets whatever force it has from the presupposition that having a free will is having a will that is powerful in a certain way and, further, that being powerful is always being able to do or obtain good rather than bad things. Freedom properly construed should be an asset and not a liability to its possessor, and a competence as opposed to an incompetence. That this is how Anselm tends to think of powers in general is especially clear in his discussion in *Proslogion* 7 about how God is omnipotent, how He is able to do anything or everything, yet cannot sin. Here Anselm insists, following Boethius, that to be able to do something bad or, to be more precise, to be able to do things that are not useful and that one ought not to do is not, properly speaking, being able at all, but rather an instance of being unable.[27] Being capable of sin is not a form of power (*potentia*), but a form of impotence (*impotentia*).[28] Since the ability to sin is not a capacity proper, and freedom is, the ability to sin is not "part of" freedom, and so the definition of freedom should involve no reference to it.[29]

In the subsequent discussion, Anselm makes clear that freedom does not come in degrees. Again, freedom is a power to preserve, or hold on to, rightness of will. Anselm argues that if a person has rightness of will, then not even God the all-powerful can take it away.[30] Consequently, the power in question turns out to be absolute, and if we think of power as an analogue of physical strength, then all rational beings must be deemed equally strong and, indeed, each one unmatchable in this respect.

A power (*potestas*) is a capacity to act in a certain way. In *De libertate arbitrii*, Anselm claims freedom is a species of the genus 'power' and

---

[26] Anselm, *De libertate arbitrii* 1; S, p. 208.
[27] For Boethius on power, see *Consolatio Philosophiae*, book 4, prose 2.
[28] Anselm, *Proslogion* 7; S, pp. 105–106.
[29] Anselm also puts forward a theological argument for not including the power to sin in the definition of freedom of choice. Since God and the angels have freedom of choice, but not the ability to sin, the ability to sin cannot be part of, or essential to, freedom. See *De libertate arbitrii* 1; S, pp. 207–208.
[30] *De libertate arbitrii* 8; S, p. 220.

freedom therefore simply a capacity for a certain kind of action.[31] By defining freedom of choice as the power to keep rightness of will, and justice as rightness of will kept for the sake of that same rightness, he has in effect identified freedom of choice with the power for justice. Having freedom of choice is the same as having the power to act justly, or the power to be (or make oneself) just. Augustinian commitments regarding necessity of grace and the limits of human capacities with respect to moral uprightness introduce complexities into the picture, however. For according to Anselm, a person who has lost her rightness of will, and who is therefore per definition unjust, is a slave to sin and can only be rendered just again by a divine act of grace.[32] Yet he insists such a person still has her freedom, her power to be just, in spite of the fact that she cannot on her own recover the rightness of will she lost. This seeming paradox, that human beings have the power to be just even when they cannot be just, Anselm counters by introducing a qualification with respect to the nature of powers. In general, at least in human beings, the possession of a power is not sufficient for activity.[33] The power to preserve rightness of will is in this respect no different from, for instance, the power to see:

> Someone who has eyesight has the power and the instrument to see a mountain. And still, if the mountain is absent and you tell him "look at the mountain", he will tell you "I can't, because it's not there. But if it were, then I could see it". Likewise, if the mountain were there but there were no light, he would say to the one who told him to look at the mountain that he couldn't without there being light: but if there were light, he could. Again if both the mountain and the light were present to the one who had eyesight but something blocked his view (for instance, if someone covered his eyes) he would say he couldn't see the mountain. But if nothing obstructed his sight, then without doubt he would have the power to see the mountain.[34]

In his example, Anselm identifies four criteria that need to be met, four partial powers that need to be in place, in order for there to be activity. In addition to the person's power to see (on the basis on which alone we should acknowledge that the person in question has the power to

---

[31] Hence, it makes no sense within the Anselmian framework to claim that a certain power is a *free* power, and that, for instance, that the human will is a free power. Instead, freedom *is* a kind of power.

[32] *De libertate arbitrii* 3; S, p. 210. See also *De libertate arbitrii* 11; S, pp. 222–223.

[33] See *De libertate arbitrii* 3; S, pp. 212–213.

[34] *De libertate arbitrii* 3; S, p. 213.

see a mountain) we need a mountain, some light, and the conditions set up in such a way that nothing obstructs the person's view. Anselm characterizes these as (1) the power of the seer, (2) the power of the seen, and the power of what is intermediate, i.e., a thing which is neither the seer nor what is seen. With respect to the latter he distinguishes between (3) the power of a helping medium and (4) the power of a non-obstructing medium. If any of the four is lacking, the person will not see a mountain, and indeed cannot see a mountain. Still, as long as the person has the first power, eyesight, Anselm insists we are justified in attributing the power to see a mountain to her. Likewise, a rational creature has the power to preserve rightness of will even when she has lost her rightness of will and so has nothing to preserve, just as the person who has eyesight does not and cannot see anything when there is no light. The power of freedom of choice is thus a power that, under certain conditions, cannot be exercised.

In assessing the modal implications of Anselm's discussion about powers, Simo Knuuttila argues that Anselm is confused.[35] Like Aristotle, Anselm treats full potency as a sum of partial potencies that all need to be in place in order for some specific act to come about, and, just as on Aristotle's account, it is hard to keep full potency, or possibility, and actuality apart. On the one hand, a partial potency is not a genuine possibility for something to come about: although a person has the power to see a mountain, it may very well be that it is not possible for her to see a mountain here and now. While full potency, on the other hand, amounts to genuine possibility, Anselm's account leaves open the question of what fills the gap between full potency and actuality, if there is such a gap. If the seeing person is put in front of a mountain on a sunny day with her eyes open and there is nothing to obstruct, will she not see the mountain? If full potency simply entails actuality, then Anselm's account of powers is not an account of possibility at all, since nothing can then be genuinely possible without also being actual, and so he appears to be committed to actualism of the sort traditionally associated with the ancient Megarian school.[36] At the same time, what is required to move something from full potency to actuality cannot be another partial potency, for the account would then prove to be

[35] Knuuttila, *Modalities in Medieval Philosophy*, pp. 73–74. See also Knuuttila, "Anselm on Modality", pp. 126–127.

[36] In *Metaphysica* IX, 1046b29–30, Aristotle criticizes the Megarians for holding that only when something is (such), it can be (such).

incoherent. Supposing Anselm's four powers required for the full power to see a mountain are all in place, what will make it the case that the person actually sees the mountain? As Knuuttila notes, Anselm says in *De casu diaboli* that what is required in the case of an act of will, in addition to the power to will, is an act of employing the power to will.[37] In the example with the mountain, this would correspond to the person's actually using her ability to see a mountain. Taken at face value, this answer is admittedly not very helpful.

A further problem for Anselm's account of power as a theory of modality is, according to Knuuttila, that the account generates inconsistent modal claims, if, as Anselm seems to believe, the presence of some partial potency is sufficient for ascriptions of (genuine) possibility.[38] Given that human beings have the power to keep rightness of will always, Anselm claims that a human being is free and *can* be morally upright, even when he has no rightness of will to keep. At the same time Anselm claims that the same human being *cannot* be morally upright, given that another partial potency for the truly righteous act is lacking.

I believe Knuuttila is right in judging Anselm's account of partial power in the *De libertate arbitrii* as in itself shaky ground for constructing a consistent modal semantics. However, if we approach Anselm's account not as something germane to the Aristotelian theory of natural potencies, but rather as a development of the Augustinian-Boethian account of power as interdefined with will and action, Anselm's powers will look less problematic and also more interesting.[39] The context in which Anselm conducts his discussion is distinctly ethical, the topic is freedom, and the focus is on the nature of rational beings and their actions, not on nature and natural change in general.

As we have seen, Augustine defines power as that which, when added to will, gives us an action. In this picture, it is clear from the outset that power is merely a necessary condition for action, and hence that there

---

[37] Knuuttila, *Modalities in Medieval Philosophy*, p. 73, and Anselm, *De casu diaboli* 27–28; S, pp. 275–276.

[38] Knuuttila, *Modalities in Medieval Philosophy*, pp. 73–74.

[39] Anselm's conception of power differs from the Aristotelian conception of power (or potency) for instance in that Anselm does not explicitly make a distinction between active and passive powers, and consequently in that such a distinction plays no systematic role in his theory of action or change. For a discussion of a later medieval treatment of power shaped by the Aristotelian distinction between active and passive potencies, see Andreas Schmidt's contribution on Aquinas in this volume.

is no danger that power—be it full or complete power—and activity collapse. There is a gap, and the gap is occupied by the will. Together will and power constitute a sufficient condition for action.

Anselm's account of partial power is a refinement of this Augustinian model. Suppose a person wills to see a mountain. In order for her to actually see a mountain she must have eyesight, there must be sufficient light, and there must be a mountain in clear view. All these conditions for action except the willing Anselm counts as belonging to power, naming them the power of the seer, the power of the seen, and the power of what is intermediate, thereby faithfully tracking the Augustinian-Boethian analysis in terms of will, power, and action. But whereas power itself is left unanalysed in the original picture, Anselm makes what is in effect a distinction between ability (or capacity) and opportunity. Furthermore, he distinguishes between different factors required for the agent to be able to employ her ability, i.e., various necessary conditions for her having the opportunity.

Against this background, however, the peculiar (and assuredly unique) nature of the power that attracts most of Anselm's attention, the power to preserve rightness, leads, if not to problems, then at least to some labyrinthine results. Immediately after introducing the example with the mountain, Anselm notes that in some cases, some of the powers just distinguished will collapse into one. In the case of looking directly at a light, the object and the 'helping medium' will be one and the same, a light.[40] Therefore, having the opportunity to see a light is not conditional on as many things as having the opportunity to see a mountain. And in the case of the ability to preserve rightness of will for the sake of that same rightness, all that is required for having the opportunity to use the ability is one thing alone, namely, that one has rightness of will.[41] But rightness of will is possessed only by the person who actually keeps rightness of will. In order to act one must in addition to the innate capacity of freedom have the opportunity to act, but one has opportunity to act only when one is in fact already engaged in the action.

Further, suppose a person has rightness of will as well as the power to keep rightness. What is required for the person who thus has both ability and opportunity to keep rightness to actually keep rightness?

---

[40] *De libertate arbitrii* 4; S, p. 213.
[41] *De libertate arbitrii* 8–9; S, pp. 220–221.

According to the Augustinian-Boethian schema, what is required once we have the power in place is simply the will to perform that act which one has the power to perform. So the person needs only to will to keep rightness. However, keeping rightness is something human beings do simply by willing (to keep) rightness, and a person who has rightness of will is *eo ipso* keeping rightness. And so, not only do the opportunity to exercise the capacity and the actual exercise of the capacity collapse, but so too do the will to exercise it and the actual exercise. Anselm explores the peculiar features of justice as dependent on the act of keeping rightness in *De veritate*:

> Since [rightness of will] is said to be 'kept', someone may perhaps say: "If rightness of will should be called justice only when it is kept, we do not receive justice when we receive [rightness of will] but we cause it to be justice by keeping it. For we receive it and have it before we may keep it. For it is not because we keep it that we receive it and originally have it, but we begin to keep it because we receive it and have it." To this we may answer that we simultaneously receive both to will it and have it. For we don't have it except by willing it. And if we will it, we thereby have it. And just as we simultaneously have it and will it, we simultaneously will it and keep it, because just as we don't keep it except when we will it, there is no time at which we will it and don't keep it. As long as we will it, we keep it, and as long as we keep it, we will it. Therefore, since our willing it and having it occur at the same time, and the willing and the keeping it are not in us at different times, necessarily, we receive simultaneously to have it and to keep it. And just as we have it as long as we keep it, we keep it as long as we have it. These things don't lead to any contradiction.[42]

Since with respect to the act of keeping rightness of will, the act, the will to act, and opportunity to act collapse in such a way that none can be said to be temporally prior to the other, full potency (or genuine possibility) and actuality also threaten to collapse. And so with respect to this particular case, Knuuttila appears to be right. If a person has both the power and the opportunity to keep rightness, this means she already has rightness, and if she has rightness, then she wills rightness and keeps rightness.[43]

---

[42] *De veritate* 12; S, p. 195.

[43] Anselm admits that the receiving and willing of rightness (opportunity) and the keeping of rightness (the action) do collapse in his picture, but the collapse is merely one of temporal simultaneity. The receiving is still prior, Anselm argues, for it is prior 'in nature' (*natura*) and thus still distinct. See *De veritate* 12; S, p. 195.

While these features may seem problematic, they dovetail with Anselm's views on the nature of human freedom and on the relation between freedom and grace. In order to perform the morally required act, a human being has to have the capacity to perform the act, the opportunity to perform the act, and the will to perform the act. Suppose a person lacks rightness of will but has the power to keep rightness of will. What must the person do in order to keep rightness of will or, to be more precise, to start keeping rightness of will? It is clear there is nothing the person can do unless she has rightness of will, but she has rightness of will only if she is already keeping rightness of will. In other words, the person cannot get herself into the position where she has the opportunity to perform the action. What must happen is that she receives rightness, the will for rightness, and even the keeping of rightness, from God. In this way God's grace is altogether necessary for the righteous act of a human being.

According to Anselm, moreover, the person who has an upright will is free not only in the sense that she has the capacity to keep rightness of will, but also in the sense that nothing can force or coerce her to give up that rightness of will that she now has—not even God.[44] The fact that she is keeping rightness of will, and so has rightness of will, means that the opportunity to act is guaranteed, and so she can keep on keeping rightness as long as she wishes to. This is up to her will alone.

Finally, the action in question, the keeping of rightness of will, is something done simply by willing. This sits perfectly with Anselm's ethics, for he argues that the moral status of a person is a function primarily of the state of the person's will as contrasted with the nature or quality of her actions.[45] Human beings are under the obligation to keep the rightness they have received. By willing to do so, they remain just. Once they stop willing rightness, however, they stop keeping rightness, and also lose the opportunity to keep rightness.

[44] See *De libertate arbitrii* 8–9; S, pp. 220–221.

[45] Because of the notion that the right action is something 'done' simply by 'willing', the distinction between right action and right will tends to turn problematic. For instance, Anselm claims in *De veritate* 5 that right wills or 'willings' may be counted among right actions (S, p. 182). For a discussion about the distinction between will and action and between free will and free action in Anselm, see my "Free Will and Free Action in Anselm of Canterbury".

Possibility as power in Anselm and Abelard

In Anselm's picture, a power (*potestas*) is a necessary but not a sufficient condition for activity. On the one hand, even if a person has the power of freedom, it may be that she cannot keep rightness of will. On the other hand, if a person has rightness of will and the power of freedom by which she can keep it, it may be that she abandons her rightness. In other words, even if all powers necessary for an activity are in place, we cannot be certain that there is activity. On this conception of power, plenitude of power merely entails genuine possibility, and not actuality.

In light of this, Anselm's account might be read as a rejection of, or at least challenge to, the statistical interpretation of possibility. If we take genuine possibility to correspond to Anselm's notion of full power, i.e., the combination of capacity and opportunity, then it is clear that possibility cannot feasibly be given a temporal-frequency interpretation, since it is at least conceivable that there will never be a will to make actual that which, in virtue of the capacity and the opportunity, could be done. If we map genuine possibility onto capacity alone, then a temporal-frequency interpretation looks altogether impossible. All human beings have a capacity to be just, yet Anselm argues that after the fall of Adam, it is in fact impossible for the majority of us to be just, since God does not extend his grace to all of us.

But if it is a challenge to the statistical interpretation of possibility, then it is highly unclear what motivates it. While Damian argues that there are things which God can do but does not will to do, and that there are therefore things that are possible but which never get instantiated, Anselm's worry seems not primarily to be that the actual might exhaust the possible. Now, I claim that what we find here is instead a much more radical philosophical challenge. As Knuuttila has pointed out, Anselm's theory of powers generates an inconsistent set of modal statements if, as Anselm suggests, we treat the presence of a capacity in an agent as sufficient ground for calling the act possible. Indeed, we are advised to call possible acts that are in fact impossible, as is the case with the postlapsarian human being with no hope for grace. What Anselm is denying is the possibility of giving 'possibility' the role of a primitive modal notion.

In *De casu diaboli*, Anselm claims that, before the world existed, it was both possible and impossible for it to exist:

> TEACHER. I think that the world was nothing before it was made.
>
> STUDENT. You speak the truth.
>
> TEACHER. Therefore, it was capable of absolutely nothing before it existed.
>
> STUDENT. That follows.
>
> TEACHER. Consequently, it was not capable of existing before it existed.
>
> STUDENT. And I say: if it was not capable of existing, then it was impossible that it ever exist.
>
> TEACHER. This was both possible and impossible before it existed. It was impossible for [the world], which didn't have the power to exist. But for God, who had the power to make it exist, it was possible. Therefore the world exists because God could make it exist before it existed, not because the world itself could exist.[46]

According to Anselm, a case can be made for the truth both of 'the world could exist before it existed' and 'the world could not exist before it existed'. Anselm treats the problem not as a puzzle of inexistent objects but as a case of dislocated modalities. The only way to get past the paradox is to realize that ordinary language (*communis locutio*) is often misleading—that there are expressions that are 'improper'—and to supply an analysis where the powers are attributed to the proper subjects:

> Due to this impropriety of speech it very often happens that we say that a thing is able, not because that thing is able, but because some other thing is able. And [we often say that] a thing, which is able, is unable, because some other thing is unable.[47]

The proper subject is the one in which the power inheres. A person has the power if and only if that person has a real positive capacity to act, a competence, rather than is liable to suffer in a certain way.[48] On this account, the 'can' in the statement 'can swim' is proper, whereas the 'can'

---

[46] *De casu diaboli* 12; S, p. 253.

[47] *De casu diaboli* 12; S, p. 253. Eileen Serene argues that Anselm's general semantic theory for modalities lacks an adequate treatment of the 'improper' assertions involving possibility and necessity, but also that this lacuna is at least partially remedied by a certain theory of predication which Anselm puts forward in an incomplete work, the so-called *Lambeth Fragments*. See Serene, "Anselm's Modal Conceptions".

[48] For this point, cf. Henry, "Remarks on Saint Anselm's Treatment of Possibility".

in 'can drown' is not. According to Anselm, the sentence 'A cannot be defeated by B' should be given the analysis 'B cannot defeat A' so that it is made clear that B, not A, is incapable in the relevant way.[49]

Consequently, neither the notion of a possible state of affairs nor the notion of a possible existent is the basic building-block of Anselm's understanding of modalities, but rather the notion of a power that an agent has to bring about certain states of affairs. Only when an actual competence of an existing being is being referred to is a 'can' (*potest*) properly used, and only by generating such properly constructed statements about the powers of beings can we be sure the resulting set of statements is consistent. Interestingly, his analysis of the 'ought to be (such)' (*debet esse*) of deontic modal statements is analogous to his analysis of the 'can be (such)' (*potest esse*) of alethic modal statements. Certain things both ought to be and ought not to be, Anselm says, such as for instance the crucifixion of Christ. The crucifixion ought to have come about in the sense that God justly and wisely permitted it to happen, yet ought not to have come about in the sense that no human being ought to have performed the deed.[50]

The power required for the proper application of a 'can' need not be such that it will ever in fact figure as a necessary constituent of a sufficient condition for the realization of the state of affairs. This we have seen in the case of the capacity to keep justice. All human beings have the capacity, but for some human beings the opportunity to use it will never actualize. Regretfully, Anselm does not directly address the issue of warrant with respect to allocating capacities for bringing about ever-unactualized—perhaps even unactualizable—states of affairs. In the discussion about freedom, he attributes the power of freedom to rational nature rather than to individuals, which may be taken to imply that power should be understood as something that belongs to an individual in virtue of that individual's belonging to a kind of being, or species. If this is the picture, then a power that belongs to all can be employed, and is employed, at least by some.

---

[49] *De casu diaboli* 12; S, p. 253: "Et cum dicimus, iste non potest vinci ab illo, non aliud intelligimus quam: ille non potest vincere istum."

[50] For a lucid discussion, see O'Neill, "'The Same Thing Therefore Ought to Be and Ought not to Be': Anselm on Conflicting Oughts", pp. 312–314. O'Neill shows that while Anselm's account allows for ethical conflicts, it does not commit Anselm to the existence of true moral dilemmas.

On this issue, Abelard is more clear. In the course of his defence of the view that God can only do what he does at some point in time, he considers the possible objection that his view entails that the human beings that are going to be damned cannot be saved by God. Further, if some human beings cannot be saved, then it seems God cannot be justified in demanding righteousness of them, since he would then be placing them under moral obligations they cannot fulfil.[51]

In answering the objection, Abelard appeals to a notion of 'possible for' which is related to the nature of an individual rather than the individual *per se*. Abelard boldly denies the truth of the conditional 'if this person (who is going to be damned) can be saved by God, then God can save this person (who is going to be damned)'. According to Abelard, while it is true that God cannot save the person who is in fact going to be damned, it is not true that the person in question cannot be saved by God.[52] The person is a human being, and human nature is such that it admits of both salvation and damnation. Therefore it is correct to say of each human being that it is possible for him or her to be saved. By contrast, God's nature is such that God does only that for which there is a valid reason. If there is a valid reason to damn a human being, then God's not doing this would be unfitting for God, and God cannot do what is unfitting, and so cannot save that particular human being.

Abelard does not invoke the Anselmian notion of partial power or capacity. Consider the case of a person A that will in fact never perform a righteous act. A's performing the righteous act is then under the statistical interpretation of possibility impossible, since A never performs the righteous act. Now according to Anselm, we should not call this act impossible, since A still has a partial power to perform the act. We should thus call the act possible, or better—for the sake of clarity—we should say that A has the power to perform the act. Abelard, by contrast, takes recourse to a notion of 'possible for' which is connected to a being's nature. Abelard thinks that it is enough that human nature is such that it admits of both salvation and damnation in order for us to be justified in claiming that the human being A, who will always sin and will never be saved, *can* be saved.

---

[51] See *Theologia 'scholarium'* 3.39.
[52] *Theologia 'scholarium'* 3.46.

Concluding remarks

The will plays a leading role in Peter Damian's, Anselm's, and Peter Abelard's discussions of divine as well as human power. From Augustine and Boethius they inherited a general theoretical framework for explaining actions where an action is dependent on two factors, the power and the will of an agent. Together power and will constitute a necessary and sufficient condition for action. If A has the power to walk (here and now) and A wills to walk (here and now), then A walks (here and now).

The framework that involves a will itself, in a way, supplies some backing for attributing the power to act otherwise, or the *liberty of indifference*, to agents. For at first blush, the model appears to ensure that we can claim that agents can act in other ways than they in fact do. The possible action, i.e., the action which a person has the power to perform, may or may not come about. Whether it comes about depends on whether the person wills to perform it or not. Thus Damian claims God could have done or brought about certain things but, as it happens, did not, because he did not will to. God could have acted otherwise. Insofar as there are unrealized possibilities in this picture, acts that are never performed, it is a rejection of actualism, the view that what is actual exhausts the possible.[53] Further, if there are things God could do, but never does (because he never wills to), such as perhaps restore the virginity of women who have lost it, then Damian's view of what is possible also constitutes a rejection of the statistical interpretation of possibility, according to which something is possible if and only if it is at some point in time actual.

It is clear however that the framework does not commit one to attributing this liberty of indifference to all beings that will and act. The claim that actualization of a possibility is dependent on an agent's will naturally leads to the question what an agent *can* will. We are no longer considering only the question what an agent can do, but also what the agent can will to do. According to Damian, God can will to do (or bring about) anything that is good. Abelard agrees, but holds that the good act is the act for which there is a valid reason, and the fact that there is a valid reason for a given act entails that any other

[53] In chapter nine of this volume, Valtteri Viljanen argues that Spinoza endorses an actualist model of power.

act would be irrational. According to Abelard, therefore, God cannot will otherwise than he does, and so cannot act otherwise than he does. Certain considerations about what God *can will* here rules out God's 'enjoying' the liberty of indifference. Abelard's God is not 'free' to act otherwise than he does.

Anselm claims freedom of choice is a power to act in a certain way. It is the capacity to keep or preserve rightness of will. Given only this capacity, we are justified in saying that it is possible for a person to be just. Now since there are in Anselm's picture human beings after the fall of Adam and Eve that never keep rightness of will, there are, on the level of individual human beings, unrealized possibilities—things they never do. In other words, the claim that some individual human being has the power to keep rightness of will cannot entail that he does so at some point in time. While a statistical interpretation of such agent-based possibility is thus impossible, Anselm is not here primarily motivated by concerns about the liberty of indifference of agents: a person that does not have rightness of will is not 'free' to keep or not keep rightness of will. Rather, his account is shaped by Augustinian commitments as to the necessity of grace for making human just action possible. Anselm's strategy for avoiding the (apparent) inconsistencies that arise from his insistence that partial powers are sufficient for something to be possible is to mark off agent-based ascriptions of possibility as basic or privileged. He thus combines a form of modal realism, where true modal statements correctly express the state of things in the actual world, with a revisionist attitude towards the large class of alethic modal statements that are stated in an impersonal form, such as 'it is possible that x y:s'. Such statements are inherently imprecise and therefore lead to ambiguities and even contradictions.

Both Anselm and Abelard at some point think of powers in generic terms, as belonging to classes of beings. What a creature *can* do depends on what powers it has, and what powers it has somehow depends on what kind of thing it is, its nature. By contrast, what a creature *will* or *will not* do is a matter of the individual creature's will. The Augustinian-Boethian understanding of the necessary conditions for activity therefore supplies content to the claim that individual human beings enjoy *liberty of spontaneity*. Whatever a person has done, she had the power to do but, more importantly, it was she herself who did it, because she willed it. Since the individual person's will is a sufficient condition for action given that she has the power, the person, by way of her will, can be said to be the principle and cause of her own actions.

CHAPTER FIVE

POWER AND POSSIBILITY IN THOMAS AQUINAS

Andreas Schmidt

Introduction

Those who are realists regarding modal claims are bound to say something about what it is that makes these claims true—what their 'truth-maker' is. Today there are two major competing theories about the truth-maker of modal claims. One of them is David Lewis' theory according to which modal claims are made true by possible worlds, with possible worlds being taken to be 'big concrete particulars' that all share the same ontological status, none of them being marked out as the actual world in some absolute way: any possible world is the actual one for its inhabitants and for them only.[1] The other theory is that adopted by Alvin Plantinga and others, who consider possible worlds not as concrete particulars but as abstract entities, viz. maximally compossible sets of propositions or states of affairs, one of which is the actual world in an absolute sense.[2]

There is however a third possibility that has gained much less attention: the Aristotelian theory according to which modal claims are made true by the powers of concrete (actual) substances.[3] That is to say, some non-actual states of affairs are possible due to actual properties of substances, namely due to their power to initiate a causal chain leading to the non-actual state of affairs. Here are some examples to illustrate this: I could stop writing this paper now. This is true because I have the power to do so. I could have become a knife grinder. Again, this is true because I had the power to initiate a causal chain leading to being a knife grinder now. And certainly I could have not existed. This is true, because my parents had the power not to conceive me. Such a theory has at least the benefit of ontological parsimony because it does not

[1] Lewis, "Attitudes *De Dicto* and *De Se*", p. 148.
[2] See Plantinga, *The Nature of Necessity*, pp. 44f.
[3] But see Pruss, *The Principle of Sufficient Reason*, pp. 299–322.

commit us to the existence of such weird things as concrete possible worlds or abstract entities.

There is, however, a serious problem: it is difficult for the Aristotelian theory to account for global counterfactual statements such as 'The world (as a whole) could have not existed'. Obviously, the truth of this claim cannot be based on powers pertaining to the world or to some of its parts. So the array of possibilities that can be based on the powers of actual particulars seems to be more limited than the array of possibilities in general. It therefore seems necessary to introduce a distinction between what is logically possible and what is 'really' possible, and admit that even if claims about 'real' possibilities are perhaps made true by substances and their powers, the truth about logical possibilities cannot be accounted for in this way. Aristotle himself points out that we need to distinguish between one sort of possibility that makes reference to powers and another sort of possibility that makes no such reference, viz. logical possibility.[4] For a theist, however, there is still an option left: one could draw on God's power and suggest that logically possible is whatever God has the power to do.

In the following I want to argue that such a modal theory is indeed to be found in Thomas Aquinas (1225–1274).[5] In the first part I will explore the question in what sense power can be attributed to God at all, in the second part I will try to show that for Aquinas logical possibilities are ontologically grounded in God's omnipotence. The third part is devoted to some objections to this theory. In the fourth and final part I will discuss another objection concerning the contingency of the world that was, at least for Duns Scotus, so serious that he felt compelled to abandon the modal theory of Thomas Aquinas and to develop an alternative that avoids the appeal to divine powers and paves the way for a theory of possible worlds as entities *sui generis*.

---

[4] "[…] *ta dunata ou kata dunamin*" (*Metaphysica* V, 12; 1019b34f).

[5] A similar theory has recently been put forward by Brian Leftow ("Aquinas on God and Modal Truth"). However, for Leftow this is only the first step in a more complex argument, and he is more interested in Aquinas' claim that God's power is identical to his (simple) essence, leading to the problem how a *simple* God can be the truth-maker for a *multiplicity* of different modal claims. Actually, Leftow does not give much textual evidence for his claim that Aquinas wants to base logical possibility on God's power, and Jeffrey Brower criticizes him (in "Aquinas's Metaphysics of Modality: A Reply to Leftow") for resting his case on one single passage, viz. *The Summa Theologica* I, q. 75, art. 6, ad 2. I think, however, that the textual basis for Leftow's thesis is much stronger than he suggests. See also Brian Leftow's answer to Brower in "Power, Possibilia and Non-Contradiction".

Does God have powers?

Following Aristotle, Thomas Aquinas adopts an ontological framework that comprises dispositional properties (i.e. powers, potentialities) in its basic inventory in addition to non-dispositional, 'categorical' properties. The notion of power is introduced by Aristotle in order to describe physical processes, and, on the face of it, also seems eminently appropriate for giving an account of God's omnipotence. But upon closer inspection, it becomes apparent that it is highly questionable whether Aquinas can attribute any power at all to God—given that a power is a potentiality and Aquinas emphasises again and again that God is pure act and that no potentiality whatsoever can legitimately be attributed to him.[6] Thomas tries to resolve this problem by means of a set of distinctions that is supposed to clarify in what sense power nevertheless can be appropriately attributed to God.[7]

He first distinguishes between active and passive powers. A passive power is a power to be affected by some extraneous influence. Evidently such a power does not appertain to God, so God could at best have an active power, the power to be a cause.[8] But here too some distinctions have to be made: Thomas Aquinas distinguishes first two types of active power: a power to act and a power to bring about some effect. The power to act is again divided into a power that is different from the act, precedes it, and brings it forth, and a power that is identical to the act.The former does not pertain to God, since Thomas Aquinas argues that God is absolutely simple.[9] Due to his simplicity, God's act has to be identical to his essence. But in this case God's power to act, taken in the first sense, would have to be different from his *essence*, precede it, and bring it forth, which is impossible. So this kind of active power is not to be found in God.[10] Things look different if the active power is identical to the act: such an active power can indeed be attributed to

---

[6] See e.g. *Summa Theologica* I, q. 3, art. 1.

[7] In *Summa Theologica* I, q. 25, art. 1.

[8] "I answer that, Power is twofold—namely, passive, which exists in no way in God; and active, which we must assign to Him in the highest degree. […] For active power is the principle of acting upon something else, whereas passive power is the principle of being acted upon by something else, as the Philosopher says [*Metaphysics* V, 12, 1019a19]. It remains, therefore, that in God there is active power in the highest degree" (*Summa Theologica* I, q. 25, art. 1, co.).

[9] See *Summa Theologica* I, q. 3.

[10] "Further, Power is the principle of operation. But the divine operation is God's essence, since there is nothing accidental in God, and of the essence of God there is

God.[11] In the case of the second main type of active power, the power to bring about an effect, the situation is different because God is not identical to his effect, and so there is no problem in attributing to him an effective power that is different from the effect, precedes it, and brings it forth.[12]

What about the compatibility of these two kinds of power with the characterization of God as pure act? As to the power to act, the answer is clear: being identical to the act, the power to act does not derogate God's pure actuality.[13] As regards the power to cause some effect, Thomas Aquinas seems to make use of a theory of causality according to which the cause actually has to have the property P (in some way or another) in order to be able to bring it about that something else has the property P.[14] So to actually have a property P is a necessary condition for having a power to cause P, and the more properties something actually has, the more effective power it has. In this respect maximal actuality is not contrary to God's effective power but entails it.[15] But what about

---

no principle. Therefore there is no power in God" (*Summa Theologica* I, q. 25, art. 1, obj. 3, translation modified).

[11] "Whenever act is distinct from power, act must be nobler than power. But God's action is not distinct from His power, for both are His divine essence, because neither is His being distinct from His essence. Hence it does not follow that there should be anything in God nobler than His power" (*Summa Theologica* I, q. 25, art. 1, ad 2). "[In God the idea of power is not retained as] a principle of action, for this is the divine essence itself; unless perhaps, after our manner of understanding, in so far as the divine essence, which contains beforehand in itself all that perfection that exists in created things, can be understood either under the notion of action, or under that of power" (*Summa Theologica* I, q. 25, art. 1, ad 3).

[12] "In creatures, power is the principle not only of action, but likewise of effect. Thus in God the idea of power is retained inasmuch as it is the principle of an effect […]. Accordingly the notion of power is retained in God in so far as it is the principle of an effect" (*Summa Theologica* I, q. 25, art. 1, ad 3).

[13] In the case of God's power to act Aquinas holds a Megaric view of power, according to which a power only exists when it is actualized; see his *Commentary on Aristotle's* Metaphysics IX, lesson 3.

[14] See *Commentary on Aristotle's* Metaphysics VII.8, n. 1443: "[E]verything that is generated is generated by something having a similar form."

[15] "For it is manifest that everything according as it is in act and is perfect, is the active principle of something, while a thing is acted upon according as it is deficient and imperfect. Now it was shown above (QQ. III, A. I; QQ. 4, AA. 1,2), that God is pure act, absolutely and in all ways perfect, nor in Him does any imperfection find place. Hence it most fittingly belongs to Him to be an active principle, and in no way to be acted upon" (*Summa Theologica* I, q. 25, art. 1, co.). That something is an active principle does not, by the way, mean that it actually produces something, but only that it *can* produce something. According to Thomas, things have a power if they have a 'principle' in them, a principle to act or to be affected, but this principle is not necessarily effective (*Commentary on Aristotle's* Metaphysics IX.1, n. 1773 and n. 1776).

the power to cause some effect? Can we attribute to God, who is pure act, an effective power that was not actualized before creation? Would not this at least be contrary to his characterization as pure act? As far as I see, Thomas Aquinas does not answer this in the question 25 of the *Summa Theologica*. But he might reply that there simply was no state of God before creation: God is outside time, and so there is no point in time in which God's power to cause was unactualized (which, of course, does not mean the created world is eternal).[16] However, as we will see shortly this idea of divine atemporality has dire consequences for Aquinas' theory of modality.

God's powers as truth-makers of modal discourse

But how far does God's power extend? Certainly, it is said that God is omnipotent, but what does that mean? This question becomes particularly acute if you consider that there is much that God clearly cannot do: he cannot sin, for example, or ride a bicycle. Let us see how Thomas Aquinas tackles this problem in the *Summa Theologica* (question 25, article 3).

If it is said that omnipotence means that God can do everything, then, according to Aquinas, 'everything' refers to the realm of everything that is possible: God can do everything that is *possible*. But what is to be understood by 'possibility'? Thomas accepts the Aristotelian distinction mentioned above between a notion of possibility that refers to the powers of substances, and the one that refers to logical possibilities. So, to which one are we referring when we say that God can do everything that is possible? If we take 'possibility' as referring to powers, we have to ask whose power is at issue here. Obviously we cannot say that God can do everything (and nothing more) that a creature (or all creatures together) can do; for surely he has the power to do much more than that. If we say instead that God's omnipotence consists in his ability to do everything that God can do, this is certainly true but

[16] "Now, a particular agent presupposes time just as it presupposes matter. Hence it is reasonably considered as acting in time *after* and not in time *before*, according to an imaginary succession of time after time. But the universal agent Who produces the thing and time also, is not considered as acting now, and not before, according to an imaginary succession of time succeeding time, as if time were presupposed to His action" (*Summa Theologica* I, q. 46, art. 1, ad 6).

quite uninformative. Aquinas says that in defining God's omnipotence in this way, one would be guilty of establishing a *circulatio in manifestatione*: 'God can do everything that is possible' would simply mean that God can do what he can do.

There is yet a third option: God's omnipotence consists in his ability to do everything that is logically possible. 'Possible' is now predicated of propositions, and propositions are logically possible if and only if the subject term and the predicate term are not contradictory.[17] So now we are able to understand why God cannot, e.g., commit any sin, despite his omnipotence. God is by definition absolutely perfect, but sin is an imperfection; and it is a logical contradiction to predicate an imperfection of something that is by definition absolutely perfect. Even God could not bring about contradictory states of affairs. But given that God's omnipotence is from the outset defined by the range of what is logically possible, his omnipotence is not restrained in any way by the fact that he is unable to bring about what is logically impossible. It might be expected that Aquinas would consider this a satisfactory answer to the initial question and end article 3 with this result.[18] This, however, is not the case. He adds a further section to the body of this article in which he argues that there is, after all, a close connection between logical possibility and the notion of power. This requires, without any doubt, further investigation, for the ontological status of logical possibilities is unsettled yet.

Aquinas' new argument comprises three steps. In the first step he presents a model that is taken from the realm of created things:

> It must, however, be remembered that since every agent produces an effect like itself, to each active power there corresponds a thing possible as its proper object according to the nature of that act on which its active power is founded; for instance, the power of giving warmth is related as to its proper object to the being capable of being warmed.[19]

---

[17] In Aquinas' terms: "[A] thing is said to be possible or impossible absolutely according to the relation in which the very terms stand to one another: possible if the predicate is not incompatible with the subject [*non repugnat subjecto*], as that Socrates sits; and impossible when the predicate is incompatible with the subject [*repugnat subjecto*], as, for instance, that a man is a donkey" (*Summa Theologica* I, q. 25, art. 3 co., translation modified).

[18] Most Neothomists also seem to think that the question is closed at this point; see the useful overview in Stolarski, *La possibilité de l'être*, pp. 224–268.

[19] *Summa Theologica* I, q. 25, art. 3.

Fire has the active power to heat other things. Water has the passive power to be heated by fire; if water comes close enough to fire, it receives heat from it. The power fire has is therefore limited by two factors: first, by the nature of fire—it can heat up, but not cool down; second, by the passive power of the water to be heated. Not everything is heatable, so not everything is, therefore, an *obiectum proprium* of the fire. The heatable things constitute the range of possibilities fire has.

In the second step, this model is transferred to God and his creative activity:

> The divine being, however, upon which the nature of power in God is founded, is infinite, and is not limited to any genus of being, but possesses beforehand within itself the perfection of all being. Hence, whatever can have the nature of being is numbered among the absolutely possible things, in respect of which God is called omnipotent.[20]

God has the active power to furnish other things with being. Socrates, e.g., has the passive power to receive being before he has been created, and he will receive it, if and only if God wants him to. While the power of fire was limited by two factors, the power of God is only limited by one: because God is being itself, his essence is not restricted by any genus; therefore, there is no mode of being he would be unable to transfer. In this sense, God's power is unrestricted. It is however limited by the second factor: God can transfer being only to something that has the passive power to receive being.

In the third step, Aquinas connects the passive power to receive being with the issue of non-contradiction. Everything that is free of contradictions has the passive power to receive being from God; what is contradictory in itself, however, could receive being only under the condition of not receiving it. This, however, is not possible, even for God:

> Now nothing is opposed to the idea of being except non-being. Therefore that which implies being and non-being at the same time is incompatible with the notion of an absolutely possible thing, within the scope of the divine omnipotence. For such cannot come under the divine omnipotence, not because of any defect in the power of God, but because it has not the nature of a feasible or possible thing. Therefore, everything that does not imply a contradiction is numbered amongst those possible things, in

[20] *Ibid.*

> respect of which God is called omnipotent; but whatever implies contradiction does not come within the scope of divine omnipotence, because it cannot have the aspect of possibility.[21]

Thus, Aquinas bases logical possibilities in the passive powers of uncreated things.[22] In addition to that, he accepts the Aristotelian doctrine that no passive property can exist without its corresponding active potency: for example, in a universe in which there are no sources of heat, water is not heatable.[23] In the same vein we could say: if there were no God as source of being, then even what is free of contradiction would not have the passive power to receive being; without God, what is free from contradiction is therefore not possible (and not impossible either). With this Aquinas has given an ontological foundation to logical possibilities—the passive power of things to receive being—that for its part cannot exist without God's active power to give being.

But this solution is far from being without problems, for now it seems that Aquinas has committed himself to the existence of *possibilia* (or even *impossibilia*) before creation since only what exists can have powers. But how is such an existence conceivable? *Possibilia* cannot be created by God, because they are the condition of possibility of creation; they must therefore be uncreated. But they cannot be uncreated and different from God because apart from God there is nothing that is not created by him; they therefore have to be in God himself, somehow. But how exactly should we understand this claim?

Again, an analogy from the realm of created things may be helpful. Sometimes we find in Aquinas formulations such as "the image of Mercury is potentially and not actually in the wood before the wood

---

[21] *Ibid.*

[22] Note that it cannot be the other way round, i.e. that passive powers are based on logical possibilities. As I read it, Aquinas attempts in these sections to answer the question as to what is the *ontological* status of logical possibilities (and in order to answer this question he refers to the 'proper objects' of active powers with their corresponding passive powers). Non-contradiction is a *criterion* for which things are 'feasible or possible' for God, but it does not help to answer the question about their ontological status.

[23] "[Aristotle] says that in one sense the potency for acting and that for being acted upon are one, and in another sense they are not. They are one potency if the relationship of the one to the other is considered, for one is spoken of in reference to the other […]; for by reason of the fact that a thing has active potency it has a power by which something else may be acted upon by it. However, if these two potencies—active and passive—are taken in reference to the subject in which they are found, then in this sense active and passive potency are different" (*Commentary on Aristotle's* Metaphysics IX.1, n. 1781).

is carved".[24] And although he sometimes accepts the attribution of properties to non-existent things,[25] it seems clear from the context, that he does not feel obligated to admit that there really are non-existing images of Mercury in pieces of wood. In the framework of his theory of powers it is easy to transform 'There is a potential image of Mercury in the piece of wood' into 'The piece of wood has a passive potency to be carved out into an image of Mercury'. By this assertion one is committed to the existence of a piece of wood and to the existence of a power, but not to the existence of any *possibile*. Could it not be the same in the case of things that are waiting to receive being from God? Can we not simply say that God has the active potency of creating Socrates instead of saying that there is a possible Socrates in God that has the passive potency to receive being from God? In this case logical possibility would be completely reduced to God's active powers. Every modal claim would be made true by what God can and cannot do. 'It is possible that I win the lottery' would be made true by God's power to make me win the lottery. 'It is not possible that it rains and that it does not rain at the same time and at the same place' would be made true by God's incapability to make it happen that it rains and does not rain at the same time and at the same place. That God has the power to bring about the first but not the second would simply be, then, a brute fact concerning his powers.

But would Aquinas accept this reduction of logical possibilities to divine powers? We do not find this step in the passage of the *Summa Theologica* under discussion (question 25, article 3). But we do find it in the *Compendium Theologiae* I, cap. 99. There he writes:

> In every change there has to be something that is identical although it is in different states, since now it is under one extreme and later on under another, which in creation does not occur in truth, but only in imagination, if we imagine that one and the same thing first did not exist, and then existed. And so creation can be called change [only] in virtue of some resemblance.[26]

So in the case of creation there is nothing identical that is first without being and that later on receives being; and that is why creation cannot

---

[24] *Commentary on Aristotle's* Metaphysics IX.5, n. 1825.

[25] "Certain of the other categories mentioned above are attributed to nonexistents, for we say that non-existent things are intelligible, or thinkable, or even desirable" (*Commentary on Aristotle's* Metaphysics IX.3, n. 1806).

[26] *Compendium Theologiae*, cap. 99, my translation.

be described as change. If there were *possibilia* before creation, then there would be such an identical thing. So we can clearly gather from this passage that Aquinas rejects the existence of *possibilia* before creation. The idea of such *possibilia* is due, according to Aquinas, solely to our imagination; but this idea is inadequate. How, then, should the possibility of the world before creation be described? Here, too, the *Compendium Theologiae* offers further information:

> Although it is true to say that before the world was, it was possible for the world to be or to become, it is not appropriate to say this in the sense of potentiality. In the case of propositions, we call 'possible' that which signifies a certain mode of truth, viz. what is neither necessary nor impossible. And so 'possible', used in this way, is not taken in the sense of potentiality, as the Philosopher teaches in Book V of his *Metaphysics* [12, 1019b19]. But if it *is* said in the sense of potentiality that it was possible for the world to exist, then it is not necessary to understand this in the sense of a passive potentiality but rather in the sense of an active potentiality; so if it is said that it was possible for the world to be before it was, this is understood as saying that God could have brought the world into being before he [actually] brought it into being. This is why we are not forced to posit that matter pre-existed the world. Thus Catholic faith posits that nothing is co-eternal with God, and for this reason professes that he is the 'Creator' and 'Maker' of all things visible and invisible.[27]

In this passage Aquinas first proposes to take the possibilities before creation as logical possibilities. But then he is willing to say, though perhaps a bit reluctantly, that these possibilities may be regarded as founded in God's power: that the world was possible before creation is made true by the active power of God to bring it forth. This does not assume any pre-existence: neither the pre-existence of the world as a *possibile*, nor the pre-existence of some prime matter from which it would be created. The *Summa Theologica* confirms this view: "[A] thing is called 'able to be created' not by reason of a passive power, but only by reason of the active power of the Creator, Who can produce something out of nothing."[28]

---

[27] *Ibid*., pp. 117f., my translation.

[28] *Summa Theologica* I, q. 75, art. 6, ad 2, translation modified. This passage is also referred to in Brian Leftow's "Aquinas on God and Modal Truth", p. 180.

Objections and responses

But with this reduction of logical possibilities to active powers of God, are we not again caught in this *circulatio* against which Aquinas explicitly warned us? I think Brian Leftow has provided the correct answer: in the passage in which Aquinas cautions us about the circle, he is dealing with an epistemological problem.[29] He asks for a criterion that would allow us to determine what is and what is not in the range of divine omnipotence, and—since God can do everything that is possible—what is and what is not possible. The information that God can do everything that is possible and that possible are those things God can do, would indeed be uninformative and therefore an improper answer to the question. The answer Aquinas offers provides an informative criterion: freedom of contradiction. But asking for a criterion must be distinguished from asking for the essence of logical possibility, and it is not circular to define the essence of logical possibility by recurring to the notion of divine power (if we do not in turn define divine power by recurring to the notion of logical possibility, of course).

A second objection might go as follows. If what is logically possible is founded in the power of God, then what is possible and what is not is ultimately a brute fact about divine power. In this way what is logically possible, necessary, and impossible itself becomes a contingent fact, which appears to be rather implausible. We can reply to this objection by noting that the contingency of what is possible, necessary, and impossible does not follow from the theory given above. Necessary, according to the theory, is whatever is unavoidable for God. If God does not have the power to change anything about his powers, having these powers is necessary. And with this the range of possibility, necessity and impossibility is necessary, too.[30]

One could, however, reformulate the objection in terms of an epistemological problem. If possible is what God can do, and if God cannot change what he can do, then, and only then, what is possible is necessarily possible. But to know God's nature is a difficult task, and so it is not easy for us to say what God can and cannot do, and so we cannot be sure whether God can, for instance, make contradictions true. The

[29] This is presumably the reason why he talks of a circulatio *in manifestatione*: it is a circular determination of *criteria*.

[30] So $\Diamond p \rightarrow \Box\Diamond p$ is true.

theory seems to demand that we be agnostic about modal claims. It seems *epistemically* possible for him to make contradictions true. We may formulate this as an objection: if the theory is true, it would be uncertain whether what is contradictory is impossible; but this is not uncertain for we know with utmost certainty that it is impossible; thus the theory has to be wrong. Those who admit that it is evident that what is contradictory is impossible can escape from the objection only if they also provide a theory that explains our evidence that contradictions cannot be true. And that is what Thomas Aquinas tries to do, even if his explanation is not very elaborate. God not only has the power to create certain things, he also knows what things he has the power to create;[31] he knows, e.g., that he cannot create anything that would make contradictions true. And he has created us in such a way that our minds participate in this knowledge; the knowledge that contradictory things are impossible is inborn to us:

> This is why our intellect knows naturally being [*ens*] and those things that essentially belong to being as such; and on this knowledge is founded the acquaintance with the first principles, as for example the impossibility to affirm and negate simultaneously, and other things of this kind. Only these principles are therefore known naturally by our intellect, while conclusions are known by means of them.[32]

To be more precise, we could say that this knowledge is innate to the *intellectus agens* and determines the way it processes the incoming *species sensibiles*:

> And in this way from the beginning all our knowledge is in a certain sense implanted in the light of the agent intellect, by the medium of universal conceptions which are continuously known by the light of the agent intellect and by which we judge about other things that are known in them beforehand.[33]

In this way we understand why we cannot even *think of* contradictions to be true: the principle of non-contradiction limits our capacity to conceive of things.[34]

---

[31] "Those things that are not, nor will be, nor have been, are known by God as if they were possible to His strength [*quasi eius virtuti possibilia*]. This is why He does not know them as having existence in some way in themselves, but as having existence only in the divine power [*in potentia divina*]" (*Summa Contra Gentiles*, lib. 1, cap. 66, n. 10, my translation).

[32] *Summa Contra Gentiles*, lib. II, cap. 83, my translation.

[33] *Quaestiones disputatae de veritate* II, q. 10, art. 6, co., my translation.

[34] In the same vein Wittgenstein writes in the *Tractatus* (3.031–3.032): "It used to

The problem of contingency and Duns Scotus' way out

What is possible is not thereby actual. So the question is how to conceive of the transition from possibility to actuality. The Aristotelian model might suggest a necessitarian conception of this transition: as Aristotle points out, active powers actualize themselves by necessity if things with the corresponding passive powers are present in a suitable way and if the actualization is not impeded by unforeseen factors. But, one might argue, God's active power does not need any substance with passive powers in order to create something, and assuredly his creating cannot be impeded by anything. In this way his creative activity may seem to be necessary.[35] Aristotle had, however, already made an important distinction in this case between rational and non-rational powers.[36] Only non-rational powers actualize themselves by necessity; rational powers depend on the will for their actualization. Even if all the external factors for actualizing the power are present, nothing happens unless the will decides so. Now God's power is surely a rational power; and so the next question is whether God's will is free or not. Thomas Aquinas here distinguishes two aspects. As regards the will towards the good, God's will is not free; it is not possible that God would not want what is good. But as to his will to create a world, his will is free; he may create a world or refrain from doing so, and he may create this world or another one.[37] In virtue of this divine freedom the created world is contingent.[38] But there remains a problem, for God's creative

---

be said that God could create anything except what would be contrary to the laws of logic. The reason being that we could not *say* what an 'illogical' world would look like. It is as impossible to represent in language anything that 'contradicts logic' as it is in geometry to represent by its co-ordinates a figure that contradicts the laws of space, or to give the co-ordinates of a point that does not exist." Notice, by the way, that in the *Tractatus* the possibility of representation is fixed by the combinatorial possibilities of the names which, in turn, reflect the combinatorial possibilities of the simple objects that constitute the "substance of the world" (2.021). So even in the *Tractatus* the logical space of possibilities is finally founded in powers, viz. in the potentialities of simple objects.

[35] Such a necessitarian theory of creation is to be found, for example, in Siger of Brabant: "The first cause, the cause of everything, is the cause of the first intelligences; it is per se, immediate, necessary, and once the cause is posited at the same time its first effect is posited, too" (*De necessitate et contingentia causarum*, in Duin (ed.), *La doctrine de la providence dans les écrits de Siger de Brabant*, p. 20).

[36] Aristotle, *Metaphysica* IX, 2 and 5, esp. 1048a11.

[37] *Summa Theologica* I, q. 19, art. 3, co.

[38] It does not follow from God's goodness that there is one world God is obliged to create, viz. the best of all possible worlds, for Thomas Aquinas thinks that there is no

act is only free if the act itself is contingent and this contingency might be endangered by Thomas Aquinas' power-based theory of modality. This can be shown as follows:

(1) The power of a person P to perform action non-A at time t_1 disappears when P performs A at t_1. This applies generally, also to God.
(2) If the (logical) possibility that non-A occurs is identical with the power of God to perform non-A, then the (logical) possibility to perform non-A at t_1 disappears when God performs A at t_1.
(3) If there is no (logical) possibility to perform non-A at t_1, it is impossible to perform non-A at t_1, and A is necessary, not contingent at t_1.[39]
(4) But freedom requires that the chosen action is contingent.

Freedom, therefore, seems to be impossible. Now, (1) appears to be evidently true. For suppose that Socrates has at t_0 the power to sit at t_1 or not to sit at t_1. If he sits at t_1, then at t_1 he has no power any more not to sit at t_1 (since it is impossible to sit and not to sit at the same time). So he has lost this power. This apparent threat to the notion of freedom is, however, averted quite easily if we suitably define contingency:

(5) An action X is contingent if it results from a *previous* power to perform X or to perform non-X.

So although at t_1 the logical possibility to perform non-A disappears, A still counts as contingent according to (5). The sort of necessity that was at issue in (3) is a *neccesitas ex suppositione*, i.e. a necessity that pertains to any state of affairs simply by virtue of being the case at a certain time, and by therefore not being able not to be the case at that time. But that does not mean that the state of affairs was necessary *before* it was the case; thus we can rescue the notion of contingency if we take

---

such best world: for every possible world, there is a world that is better, see *Summa Theologica* I, q. 25, art. 5 and 6, co.

[39] "Everything that is must be when it is, and everything that is not, must not be when it is not" (*Aristotle*, On Interpretation. *Commentary by St. Thomas and Cajetan* I, lect. 15). If we bear in mind that Aquinas uses a power-based notion of modality then there is no need to think that he commits the logical blunder of mixing up *necessitas consequentiae* and *necessitas consequentis* and of concluding from $\Box (p \rightarrow p)$, together with p, that $\Box p$.

it as a contingency in the sense of (5).[40] The problem is now that we cannot apply (5) to the actions of God because God is outside time:

(6) God is not acting in time, so in relation to God, there is no before and after.
(7) Therefore God's chosen actions are not contingent but necessary; and so God is not free.

This problem becomes quite obvious when we consider divine timelessness as analogous to an eternal present in which everything is at the same time.[41] Could God have done otherwise? No. He could have decided otherwise only if *before* choosing a world he had the power to decide in this or in that way. But in God's eternal present there is no before and after; in God's eternal present God has always already (*sit venia verbo*) chosen.

This is a rather unwelcome result. But what can be done to solve the problem if one wishes to stick both to the contingency of God's acts and to the eternity of his will? Duns Scotus, who was well aware of the problem, decided to reject the antecedent of (2) and thus Thomas Aquinas' whole theory of modality.[42] According to Duns Scotus, (logical) possibilities cannot be based on divine powers but are independent of them.

> If, before the creation of the world, not only the world had not existed but, *per incompossibile*, even God had not existed but had begun to exist from himself [later on], and then had the power to create the world; and if there had been an intellect prior to the world composing the proposition 'The world will exist,' this would have been possible because the terms would not have been contradictory, though not due to some principle in the possible thing or something active corresponding to it; this 'The world will exist' would also not have been made possible, formally speaking, by God's potency, but by the potency that was the non-contradiction of

[40] "This is not absolute necessity, but necessity by supposition. Consequently, it cannot be said absolutely and simply that everything that is must be, and that everything that is not must not be" (*Aristotle*, On Interpretation. *Commentary by St. Thomas and Cajetan* I, lect. 15). An event that has conditional necessity can be contingent if it is the effect of a cause that previously was not totally determined to that effect (see *ibid.* I, lect. 13).

[41] See *Summa Theologica* I, q. 10, art. 4, co., "aeternitas est tota simul".

[42] He also rejects premise (1). But this is possible only by understanding 'Person P has the power to perform A at t_1' in a non-standard way that results from his rejection of the antecedent of (2).

> these terms which would not have been contradictory even if [no] active potency in respect of this possible [proposition] had accompanied that non-contradiction.[43]

According to Duns Scotus, the logical space of possibilities exists independently of God; it would exist even if (*per impossibile*) God did not exist. With this Duns Scotus has a notion of possibility at his disposal in which alternative possibilities do not simply vanish if one of them becomes actual; the alternatives continue to exist simultaneously to the actual one as something we might call (only slightly anachronistically) 'possible worlds'. This allows him to also give a different definition of contingent actions: an action X is contingent if and only if there is (at least) one possible world in which action X is performed and (at least) one possible world in which action X is not performed.[44]

This eliminates the need to define the contingency of actions by drawing on their past; and so divine freedom and eternity become compatible:

> For God can will anything but in eternity, i.e. in the single moment of eternity, and by virtue of this singular will he is in this single moment cause of some effect A. Just as it is true that, if my will existed in just one single moment of time, it would at this moment produce the act of

---

[43] Duns Scotus, *Opera Omnia* IV, Ordinatio I, dist. 7, q. 1, n. 27; pp. 118f., my translation. See also Ordinatio I, dist. 36, q. unica, n. 61; (*Opera Omnia* VI, p. 296): "[T]his logical possibility could exist in an absolute way—in virtue of itself—even if *per impossibile* no omnipotence were related to it" (my translation), and *A Treatise on Potency and Act*, q. 1 & 2, n. 18 (p. 79): "Hence if an intellect existed that could formulate the proposition: 'The world will exist' before the world existed, this would be a logical potency, even though there was nothing in passive potency to becoming a world, nor even any active potency to give it existence, to assume the impossible, provided it would not be contradictory that some such active potency exist in the future."

[44] According to Simo Knuuttila, the novelty in Scotus' modal theory consists in "the conception of synchronic alternatives and the refutation of the Aristotelian thesis of the necessity of the present" (Knuuttila, *Modality in Medieval Philosophy*, p. 138), and I entirely agree with this account. However, Knuuttila also thinks that the necessity of the present is entailed by what he calls "the statistical interpretation of modality" that he also traces back to Aristotle (see his *Time and Modality in Scholasticism*, p. 166). So in order to avoid the necessity of the present, Duns Scotus has to deny the statistical theory of modality (see *ibid.*, p. 221). I think, however, that it is not the statistical theory of modality that is at issue here. In my view the necessity of the present is rather due to a notion of possibility that refers to the power to bring about something; and it has problematic deterministic consequences only if this power-based notion of possibility is so universalized as to absorb logical possibility—a position that I ascribed to Aquinas. (Otherwise one could avoid determinism by simply distinguishing the sort of possibility that makes reference to powers from logical possibility.) It is, therefore, this power-based notion of logical possibility that Duns Scotus has to deny.

> the will contingently (so it could put itself from one state into another, and this not because it existed already at another, earlier moment, but because it produces such an act of will freely and contingently), it is true in the same way that in this very moment of eternity in which the divine will produces the effect A, A could equally not be [*posset A non esse*]; otherwise it would follow that, if the divine will were a cause, the effect A would be necessary.[45]

But what, then, is the ontological status of logical possibilities? The question that bothered Thomas Aquinas seems again to have no answer.[46] So perhaps Thomas Aquinas' power-based theory of modality is not so unattractive after all for a theist: remember that he still has the option either to reject the contingency of the world or to reject the atemporality of God. The first view is taken by Spinoza, the second by contemporary advocates of Open Theism.

[45] *Reportatio Parisiensis examinata I 38–44*, dist. 39/40, n. 43; p. 88, my translation.

[46] Knuuttila argues that for Duns Scotus "the domain of possibility [...] as such does not have any kind of existence. It is objective, however, in the sense that it would be comprehended in the same way by all omniscient intellects" (*Modalities in Medieval Philosophy*, p. 138). This, however, is more an expression of the problem than an answer to it.

CHAPTER SIX

CAUSAL POWER IN DESCARTES' MIND-BODY UNION

Juhani Pietarinen

Introduction

In the *Meditations on First Philosophy*, René Descartes (1596–1650) argues that human mind and body are distinct substances with entirely different natures. In the Second Meditation the essence of mind is claimed to consist of thinking, appearing as intellect and will which are active in the sense of being causally independent of any other power (save God). As purely active thinking the mind cannot suffer any passions; in particular, it cannot be affected by anything belonging to our bodily part. The Fifth Meditation reveals the essence of human bodies: they have just properties of extension like length, breadth, and depth as well as shape and position. Changes may occur in these properties but only passively, due to some external cause, for extension as such lacks all activity. As merely extended things bodies possess no power to cause changes in themselves, in other bodies, or in anything else. All this, Descartes claims, becomes revealed as evident truths by careful thinking. We can form a clear and distinct idea of ourselves as a thinking non-extended being and of our body as an extended non-thinking thing.

In the Sixth Meditation, however, Descartes seems to tell a different kind of story. Our mind and body form now a special kind of union in which the extended body causes passions in the mind by acting on it. This is taken as an evident fact of experience.[1] Feelings of pain, hunger and thirst make it evident that our mind becomes affected by

[1] In Descartes' view, the power of mind to move body must be accepted, like the power of body to affect mind, as a fact which "everyone invariably experiences in himself without philosophizing" (Letter to Elizabeth, 28 June 1643; CSMK, p. 228). To Arnauld he wrote: "That the mind, which is incorporeal, can set the body in motion is something which is shown to us not by any reasoning or comparison with other matters, but by the surest and plainest everyday experience" (Letter [for Arnauld], 29 July 1648; CSMK, p. 358).

our body, and such 'teachings of nature' cannot be illusory, Descartes argues, for benevolent God has established that our nature senses and feels in this way.[2] But how can the body act upon the mind, if it as a passive extended thing lacks all causal power and the mind as active thought is unable to suffer passions? From where does the body get its causal power and the mind its receptivity? Moreover, it seems extremely implausible to think that bodies, assuming they have power to affect each other, would by this kind of physical power be able to cause changes in something that lacks all properties of extension. One may also wonder how the mind, assuming it has power to make assertions and to deliberate between desires, could by this mental power also be able to cause motions in the body. What in the properties of extension would make bodies receptive to the power of thinking?

And even if we regard bodies as being receptive in this way, unwelcome things seem to follow. Let us think of causal relations as transmissions of power from cause to effect.[3] According to this view of causality, when I willingly make a movement in my body, say make my hand rise, some amount of mental power will be transferred into my body. This would mean that at least some bodily events can be determined by two different kinds of power, of bodily kind in body-body interactions and of mental kind in mind-body interactions, and correspondingly two different kinds of receptivity should be assumed to pertain to bodies, one to the power of thinking and another to the power prevailing in the physical world. The case would be similar with respect to the mind: mental events should be thought to be determined by and thus be receptive to two different kinds of power.

Would it be possible to avoid the above difficulties without abandoning the Cartesian dualism and the idea of causal interaction in the mind-body union? If we look at how the difficulties arise, one major reason for them is the presupposition that the causal power of bodies and minds inheres in them in the sense modes inhere in substances, so that the power of bodies is considered as different by nature from the power of minds. However, Descartes never subscribed to this presupposition. On the contrary, the main point in his replies to such critical readers of the *Meditations* as Pierre Gassendi, Princess Elizabeth,

---

[2] Sixth Meditation; CSM II, p. 55.

[3] In accordance with W. V. O. Quine: "[W]e might seek a simple-minded or root notion of causality in terms of the flow of energy. Cause and effect are events such that all the energy in the effect flowed from the cause" (*The Roots of Reference*, p. 5).

Antoine Arnauld, and Henry More is that we should not account for causation between things in terms of their essential nature but *see causal power as something separate from their essence.* In this chapter, I attempt to show how this idea opens a way of attributing to Descartes a consistent and unified view on causality in the mind-body union.

My approach is as follows. According to the metaphysical theory of the *Principles of Philosophy*, the power of bodies to move other bodies does not lie inherently in the bodies themselves but derives from God's power. Now, why not derive similarly from God's power also the mind's power to cause movements in the body and the body's power to affect the mind so that we could arrive in this way at a unified explanation of all kind of causal interaction there exists in the world? This seems a natural solution, and I will argue that it was not only open to Descartes but is, in view of certain important textual evidence, something he indeed seems to have had in mind.

Besides outlining the way in which the one and same basic model applies to different kind of causal interactions, I briefly consider four major problems associated with the Cartesian union. The *heterogeneity problem* is concerned with the question of how mind and body, being entirely different kind of substances, can act upon each other. How is it conceivable that something corporeal in nature can produce ideas which are modes of the mind, and something immaterial in nature can cause movements which are modes of the body? The *dissimilarity problem* is a special problem of causation from body to mind: how is it to be explained that our perceptual ideas like colours, sounds, and flavours do not resemble the objects they represent or the brain states causing them?[4] The same problem arises with respect to pleasure, hunger, and other bodily sensations, as well as emotions and feelings. To the other direction of causation we have two main problems. The *duplication problem* is concerned with the question of how both God, claimed by Descartes to be the cause of all motions in the world, and a finite human will producing voluntarily bodily movements, can alone be the

[4] The identification of this problem as distinct from the heterogeneity problem, and its label, are due to Marleen Rozemond ("Descartes on Mind-Body Interaction: What's the Problem?"). As Rozemond accurately shows, the dissimilarity problem will remain even when causal transfer from body to mind is admitted. She notes how Descartes' attitude to the two problems was entirely different: he accepted the interaction between body and mind as a brute fact, not needing or even admitting of any philosophical account, but was very much occupied with the question of the dissimilarity between motions in the body and the corresponding ideas in the mind.

sufficient cause of such movements. Last, we have the *closure problem*, the problem of reconciling the mind's power of acting on body with the picture of corporeal world as a causally closed domain.[5]

Causal power as distinct from the essence of things

The point of distinguishing between the power and the essence of things becomes apparent already from Descartes' answer to Gassendi, who among the first commentators wondered how there can be causal interaction between mind and body without mutual contact between what moves and what is moved. "It is not necessary for the mind itself to be a body, although it has the power of moving the body", he wrote.[6] The point is restated in a letter to Clerselier, again as a reply to Gassendi, as follows:

> [T]he whole problem contained in such questions arises simply from a supposition that is false and cannot in any way be proved, namely that, if the soul and the body are two substances whose nature is different, this prevents them from being able to act on each other.[7]

Descartes is very clear on this: the essential difference between mind and body is one thing, and their power to affect each other another and quite a different thing.

This is the main lesson also in the letters he wrote to Princess Elizabeth in summer 1643. He advises the Princess of not trying to conceive "the soul's power to move the body and the body's power to act on the soul and cause its sensations and passions" either in terms of extension or in terms of thought, for "if we try to solve a problem by means of

---

[5] I take it for granted that all interactions in the Cartesian union are causal in the sense of efficient causation. In the Third Meditation, Descartes says without qualification that the crucial adequacy principle that there must be at least as much reality in the efficient cause as in the effect is true not only in the bodily world but also "in the case of ideas", that is, when bodily events cause ideas in mind (CSM II, p. 28). Causal language, referring to interactions in both ways, is used throughout the *Meditations* and *The Passions of the Soul* without any indication that something else than efficient causation would have been meant, and the same seems to be the case throughout Descartes' writings. On my interpretation of the interactions in the mind-body union, he indeed had no reason to think otherwise. That the mind has efficient causal power with respect to body and the body with respect to mind should be taken as an essential feature of the Cartesian union.

[6] Replies to the Fifth Set of Objections; CSM II, p. 266.

[7] Appendix to the Fifth Set of Objections; CSM II, p. 237.

a notion that does not pertain to it, we cannot help going wrong".[8] Although the body in itself is thought to be extended, the power to move it cannot be made intelligible in terms of notions characteristic for the domain of extension (motion, shape, location, contact), nor can the power to cause such mental changes as sensations and emotions be accounted for in terms of notions belonging to the domain of pure thought (reason and will). It is no good in either case to try to derive the causal power from the nature of body or from the nature of mind, but only from something essential to the way they are united with each other.

What then pertains essentially to the Cartesian union? How in particular should we understand the power by which the body affects the mind and the power by which the mind acts upon the body?

Power in the corporeal world

Let us begin with considering Descartes' view on corporeal reality, in particular with his conception of causal power in transactions between bodies.[9] In the *Principles of Philosophy*, he explains the nature of power to be as follows:

> In this connection we must be careful to note what it is that constitutes the power of any given body to act on, or resist the action of, another body. This power consists simply in the fact that everything tends, so far as it [is in itself], to persist in the same state, as laid down in our first law. [...W]hat is at rest has some power of remaining at rest and consequently of resisting anything that may alter the state of rest; and what is in motion has some power of persisting in its motion, i.e. of continuing to move with the same speed and in the same direction.[10]

Power is identified here with the *tendency* of a body to persist in its state of motion or rest as far as it is 'in itself'. What is involved in this notion? In an earlier work Descartes argues that bodies and their individual parts tend to move rectilinearly:

---

[8] To Elizabeth, 21 May 1643; CSMK, p. 218.

[9] For more detailed expositions of this view, see Gary Hatfield's "Force (God) in Descartes's Physics" and Daniel Garber's *Descartes Embodied*, chapters 8–10.

[10] *Principles of Philosophy* II.43; CSM I, p. 243, translation modified.

> I shall add, as a third rule, that when a body is moving, even though its motion for the most part takes place along a curved path and, as we said above, it can never make any movement which is not in some way circular, yet each of its parts individually tends always to continue moving along a straight line. And so the action of these parts—i.e. the tendency they have to move—is different from their motion.[11]

Thus the tendency to move rectilinearly and rectilinear motions should be kept separate. A similar reminder of the necessity of distinguishing between motion and tendency to move can be found in the *Optics*: the light should not be regarded as a movement but as a tendency to move along straight lines.[12] In the *Principles* this kind of tendency of bodies is restated as the second law of nature.[13]

The notion of tendency is needed to explain how God preserves motion in the corporeal world at every moment of time. Because no motion can occur at an instant of time, something else must be required:

> It is true that no motion takes place in a single instant of time; but clearly whatever is in motion is determined, at the individual instants which can be specified as long as the motion lasts, to continue moving in a given direction along a straight line, and never in a curve.[14]

The 'determination at an individual instant' refers to tendencies which, Descartes argues, cannot be motions.[15] What exist at particular instants of time are the tendencies of bodies to move in a straight line. God has created them as a device for preserving motion in the world according to his immutable and simple nature, and because tendencies reflect God's nature they cannot be explained in terms of motion or any other property of extension. However, all actual motions result from tendencies; bodies move in virtue of the power of their tendencies.[16] For instance,

---

[11] *The World*; CSM I, p. 96.
[12] CSM I, p. 154.
[13] CSM I, p. 241.
[14] *Principles of Philosophy* II.39; CSM II, p. 241.
[15] For example, in the *Optics* Descartes remarks that "it is necessary to distinguish between the movement and the action or the tendency to move" (CSM I, p. 154). His view is that motions, however small, do not consist of tendencies or inclinations but are determined by them. Sometimes he speaks of tendencies as an 'agitation' to motion (*Principles of Philosophy* III.122).
[16] To quote Garber, the tendency "found in the body at an instant is something that *determines* the body to move, that which is *required* for the body to move, in short, a *cause* of motion, an impulse, a force, on at least one understanding of Descartes" (*Descartes's Metaphysical Physics*, p. 287). The controversial issue of the ontological

the actual circular motion of a stone in a revolving sling results from the tendencies to move at the same time along the tangent line and the radius line plus the tendency of the sling to keep the distance from the centre unchanged.[17] The actual motion depends then on the relative strength of the simple tendencies of the moving body.

From the idea of tendencies as reflecting God's immutable power Descartes derives his first law of nature according to which each body persists, in virtue of its tendencies, in its present state as long as it is 'in itself', that is, as long as its tendencies remain unaffected by other bodies. It should be noted that tendencies, in Descartes' view, not only guarantee the *persistence* of bodies in the same state if nothing prevents, but in virtue of them bodies also *strive* to keep their state when something prevents the tendencies to be realized. He remarks how the sling, although it may prevent the stone from moving along tangent line at a certain moment, does not prevent it from *tending* or *striving* to move that way.[18] Tendencies mean in Cartesian physics power in virtue of which bodies begin to move, strive to keep in moving, act upon other bodies and resist external interference.[19] This power determines the direction of the movements of bodies and the strength of their striving to keep in their present state.[20]

---

status of Cartesian tendencies will not be addressed here. Their non-extended nature seems to exclude them from the modes of bodies. The occasionalist reading of them as God's presence at every single moment does not accord very well with Descartes' common way of speaking of them as tendencies *of* bodies. In a certain way, the notions of power and tendency are like those of substance, duration, order, number and others which are said by Descartes to extend to all classes of things (*Principles of Philosophy* I.48; CSM I, p. 208). Thus understood, we could speak of the power of things in the same way as of the number or duration of things, and equally of power of bodies and power of minds. This opens a way of seeing Cartesian tendencies as trans-categorial, as "protected from the dualist split", as Jonathan Bennett takes causal concepts, including the concept of causal power, to be in Spinoza (*A Study of Spinoza's* Ethics, p. 44).

[17] *Principles of Philosophy* III.57; CSM I, p. 259.

[18] *Ibid.*

[19] The very term 'tending' is chosen, Descartes says in *The World*, because "it seems to signify some effort, and all effort presupposes resistance" (AT IX, p. 84). In the *Principles of Philosophy*, he accounts for the power of bodies in terms of their tendency to persist in the same state, which prompted Leibniz to remark that a notion of power derived from such a tendency alone does not account for resistance (AG, p. 172). However, Leibniz ignored that tendencies to remain in a given state are derived in turn from tendencies to move rectilinearly, and these are clearly assumed by Descartes to be strivings implying resistance to change.

[20] In *The World*, the first law of motion states that a body having once begun to move, will "always continue *with an equal force* until others stop or retard it" (CSM I, p. 93, my emphasis).

If actual movements of bodies are determined by tendencies, we should expect that also the laws of motion somehow depend on them. In the *Optics*, Descartes explains that rays of light (considered as tendencies) are deflected by bodies they encounter in the same way as movements of balls are, because "the action or tendency to move […] must in this respect obey the same laws as motion itself".[21] When Fermat raises doubts whether the tendency to move should follow the same laws as the movement itself, Descartes replies:

> As in fact it cannot reasonably be doubted that the laws which govern movement, which is the actuality, as he [Fermat] says himself, must govern also the tendency to move, which is the potentiality of the same actuality; for although it is not always true that what has once been in potentiality is later in actuality, it is altogether impossible for something to be in actuality without having been in potentiality.[22]

It is of course misleading of Descartes to speak about tendencies as 'potentiality' and movements as 'actuality', for tendencies should be considered as equally actual as movements, the crucial difference being that tendencies are instantaneous in contrast to movements as transitional states of bodies. His point is clear, however: the laws that apply to motions apply necessarily also to tendencies. I take this to mean, in particular, the following three principles:

(P1) The tendencies of an object remain the same until another object causes a change in them.[23]
(P2) At every instant of time, all objects in motion tend to move in a straight line.[24]
(P3) In causal interaction, the loss in the power of the tendencies of the acting object equals the gain in the power of the tendencies of the object acted upon.[25]

The laws of motion stated in the *Principles of Philosophy* are derived from the presumption of the immutability of God who has created all

---

[21] CSM I, p. 155.
[22] To Mersenne, 5 October 1637; CSMK, p. 74.
[23] In accordance with Descartes' first law of nature, stated in the *Principles of Philosophy* II.37; CSM I, p. 240.
[24] This is the second law of nature, stated in the *Principles of Philosophy* II.39; CSM I, p. 241.
[25] In accordance with the third law of nature; *Principles of Philosophy* II.40; CSM I, p. 242.

motion and "always preserves the motion in the precise form in which it is occurring at the very moment when he preserves it".[26] However, in view of Descartes' argument that there exist at every particular moment only tendencies to move, what God primarily conserves should be the total amount of power in the form of tendencies, and only secondarily the total quantity of motion. And this is how Descartes actually explained the matter to More: "[W]hen I said that the same amount of motion always remains in matter, I meant this about the force which impels its parts."[27]

The principles (P1)–(P3) have a central position in Descartes' explanation of causality in the corporeal world.

Causal interaction between bodies

According to (P3), what takes place in causal interaction among corporeal things is a change in the respective tendencies of the acting body and the one acted upon. This is what happens on the metaphysical level when on the phenomenal or empirical level we speak of resistance and impact between bodies. Four aspects related to this kind of change are important for my argument.

First, Descartes shared the common view that causal transactions in the physical world occur through mutual contact between the causing bodies and the affected ones, which on his account means that they have a common surface.[28] Because mind and body cannot meet in this way, Descartes was forced to look for something analogous and came to the idea of co-extensionality of mind with body, as will be seen below in the section discussing mind-body causation.

Second, in contrast to the common view, Descartes held that causes are simultaneous with their effects. When Caterus objected to the idea of God's self-causation by appealing to the common intuition that causes must occur prior to effects, he replied:

---

[26] *Principles of Philosophy* II.39; CSM I, p. 241.

[27] To More, August 1649; CSMK, p. 382. Cf. Garber's comment on this letter: "This suggests that what God directly conserves is not motion itself, the effect, but its cause, the impulsion he introduced into the world at its creation, the cause that results in motion" (*Descartes' Metaphysical Physics*, p. 278).

[28] See e.g. his reply to Arnauld's objections to the *Meditations* (CSM II, p. 177).

> [T]he natural light does not establish that the concept of an efficient cause requires that it be prior in time to its effect. On the contrary, the concept of a cause is, strictly speaking, applicable only for as long as the cause is producing its effect, and so it is not prior to it.[29]

Also to Arnauld's similar objection he remarked that the notion of a cause is "applicable only during the time when it is producing its effect".[30] That cause and effect cannot occur but simultaneously follows directly from the conservation principle: at each instant of time a loss in the power of the cause must be balanced by a simultaneous gain in the power of the effect. By (P1), this change in the respective powers will prevail until either of them becomes affected by another body.

Third, we have the idea that an effect cannot have more reality or perfection than its cause, for the effect, Descartes says, cannot obtain its reality from anywhere else than from the cause.[31] Taking into account that the reality of the world, on the basic metaphysical level, consists for Descartes of tendencies expressing God's power, the principle amounts to saying that *the effect cannot possess more power than its efficient (and total) cause*. This must be so because of the balance between the power the agent will lose and the power the patient will gain in causal interaction. The power that makes an iron bar expand depends in this way on the power contained in the fire. The important thing here is that the fire as a cause need not be otherwise similar or have common properties with the bar: there is nothing like 'expanding' in it, nor do the movements of fire and iron bar resemble each other. Both phenomena are, however, determined by *the same kind of power*, that is, by certain tendencies expressing God's power. This is the 'reality' the effect cannot have more than is contained in its efficient total cause. The more a thing obtains this kind of power, the higher is the degree of reality or perfection it possesses, and the less dependent it will be on anything else.[32]

Fourth, the power of the effect depends in some regular manner on the power of the cause. God has established the nature as an ordered system in which changes in the power of the affected bodies corre-

---

[29] Replies to the First Set of Objections; CSM I, p. 78.

[30] CSM I, p. 167.

[31] Third Meditation; CSM I, p. 28; *Principles of Philosophy* I.18; CSM I, p. 199.

[32] God's perfection is infinite, for he is the cause of all other things and thus absolutely independent. The human will, being absolutely free, is "a supreme perfection in man [making him] in a special way the author of his actions and deserving of praise for what he does" (*Principles of Philosophy* I.37; CSM I, p. 205).

spond to changes in the power of the affecting bodies in accordance with natural laws. As briefly described above, Descartes derives certain general principles governing tendencies and motions from metaphysical suppositions concerning the nature of God, but in discovering specific regularities in the power and motions of bodies in particular situations empirical observations are needed.[33] In Cartesian physics, the regularities are understood as deterministic natural laws, but the connections between minds and bodies can hardly be supposed to be lawlike in the same sense. Anyway, also the latter, because of belonging to the ordered system established by God, must follow, if not laws in as strict sense as in physics, some kind of general principles governing the changes in relevant tendencies.[34]

We may pack the last three aspects into a general principle of causal adequacy as follows:

(CA) A thing X acts causally upon a thing Y at time t = at the moment t the power of certain tendencies T in X is diminished and the power of certain tendencies T' in Y is increased by the same amount in accordance with some general law.

This is what happens, in view of Descartes' reasoning, on the fundamental metaphysical level in causal interaction. It is important to see the double role of tendencies in causation: a particular movement of a body at some moment is directly determined by the tendencies it has at that moment, and the state of these tendencies, their power and direction, is in turn determined by the causal power of other bodies. This *double-aspect model of causation* proves to be of crucial importance in

[33] Thus, through the necessity of observations, the explanation of causal interactions between bodies hangs inseparably on certain aspects of body-mind causation. Most importantly, to what extent we may trust the discovered laws of mechanics will be determined essentially by the reliability of the information received through the perceptual system. Descartes insists that our perceptual and sensational ideas always contain "some truth", in spite of their being more or less confused and dissimilar to their causes (Sixth Meditation; CSM II, p. 55). But how can one filter the true content from the misleading ideas? The question is raised and discussed, with a suggestion for solution, by Amélie Oksenberg Rorty ("Descartes on Thinking with the Body"). This might be called *the reliability problem* of the Cartesian mind-body union, a problem that cannot be discussed here.

[34] Descartes remarks in the Sixth Meditation how human nature including perceptions and emotions belongs to the "ordered system of created things established by God", so that we can trust on what the nature teaches us, that is, what we observe about the regularities in the interactions between mind and body (CSM II, p. 55).

understanding the nature of causal interactions in the Cartesian union between mind and body.

This also suggests an interpretation of Descartes' distinction between God as the primary and general cause of all motions in the world and the laws of nature as their secondary and particular causes.[35] As the primary cause, God has created the existence of the tendencies in bodies and maintains them active by the same action, that is, by the same amount of power as their creation required. In this way tendencies reflect or express God's power and immutable nature. However, this immutable action of God cannot be the cause of constant *changes* in the power and direction of tendencies of interacting bodies. Therefore, to admit changes and still keep order in the world, general laws of nature are needed to determine how tendencies of bodies become affected by other bodies in particular situations. Through such laws God as the secondary cause controls how the tendencies—which he as the primary cause has created and continually conserves—produce motions in the constantly changing world.

Body-mind causation

Let us turn next to the topics of causal interaction in the Cartesian union, and consider first causation from body to mind.

To begin, we may notice that Descartes often speaks of mental events ('thoughts') as if they were movements in the mind. In a letter to Regius he explicitly says how the terms 'action' and 'passion', when extended to immaterial things, refer to something "in such things which has to be considered as analogous to motion":

> We should use the term 'action' for what plays the role of a moving force, like volition in the mind, while we apply the term 'passion' to what plays the role of something moved, like intellection and vision in the same mind.[36]

In this passage Descartes refers to mind-mind causation in which both the cause and the effect are mental events, for example, when I make myself to imagine an apple. But how do ideas arise from external causes? Descartes explicates his view to Mesland as follows:

---

[35] *Principles of Philosophy* II.36–37; CSM I, p. 240.
[36] To Regius, December 1641; CSMK, p. 199.

> [The mind] receives its ideas partly from objects which come into contact with the senses, partly from impressions in the brain, and *partly from prior dispositions in the soul* and from movements of the will. Similarly, the wax owes its shape partly to the pressure of other bodies, partly to the shapes or other qualities which it already possesses, such as heaviness or softness, and partly also to its own movements, in so far as it has in itself the power to continue moving when it has once been set in motion.[37]

According to this explanation, the mind has *innate dispositions* which for their part determine the nature of the ideas, and by the power of which the mind preserves those ideas to the extent it can. The role and importance of such innate dispositions is emphatically set forth in Descartes' often quoted response to a broadsheet published anonymously by Regius:

> [T]here is nothing in our ideas which is not innate to the mind or the faculty of thinking, with the sole exception of those circumstances which relate to experience, such as the fact that we judge that this or that idea which we now have immediately before our mind refers to a certain thing situated outside us. We make such a judgement not because these things transmit the ideas to our mind through the sense organs, but *because they transmit something which, at exactly that moment, gives the mind occasion to form these ideas by means of the faculty innate to it*. […] The ideas of pain, colours, sounds and the like must be all the more innate if, on the occasion of certain corporeal motions, our mind is to be capable of representing them to itself, for there is no similarity between these ideas and the corporeal motions.[38]

The way external objects become represented is determined by mind's own power in the way this power will work 'at exactly that moment' or 'on the occasion' it becomes influenced by the power of certain movements in the pineal gland. Based on this passage, Margaret Wilson claims Descartes to hold that "a motion in the brain 'excites' the mind to 'form' as an actual conscious state a sensation which previously existed in it, but only potentially, or as a capacity of thought".[39] And 'ideas' should be taken in a general sense: not only perceptual ideas representing external objects are generated in this way by innate tendencies, but also emotions which represent internal states of body. What kind of ideas we have depends on the particular way mental tendencies are related to tendencies of external objects and, ultimately, to those in the pineal gland.

---

[37] To [Mesland], 2 May 1644; CSMK, pp. 114–115, my emphasis.
[38] *Comments on a Certain Broadsheet*; CSM I, p. 304, my emphasis.
[39] Wilson, *Ideas and Mechanism*, p. 49.

To what extent can such mental dispositions be expected to act like tendencies in the material world? Descartes seems to be committed to extend the idea of the preservation of God's power also to mental events, because all that is real, including human mental power, falls under the supreme perfection of God.

> [God] would not be supremely perfect if anything could happen in the world without coming entirely from him. […] Philosophy by itself is able to discover that the slightest thought could not enter into a person's mind without God's willing, and having willed from all eternity, that it should so enter. […] God is the universal cause of everything in such a way as to be also the total cause of everything; and so nothing can happen without his will.[40]

Now, granting that the total amount of God's power prevails in the universe, the law of persistence (P1) holds true of mental tendencies, as Descartes actually implies in the Mesland letter quoted above. It also follows that a loss or gain in the strength of a mental tendency must be balanced by a corresponding change in the tendency related to it; thus (P3) is valid.

The principle (P2), however, does not apply here; to talk of human thoughts as tending to move rectilinearly does not make sense, even if they are imagined as 'movements' in some extended sense. The idea of simplicity of God's nature, from which Descartes derives (P2), does not offer any interesting implications in the case of human thinking. Rather, two other assumptions concerning the divine nature seem relevant: complete truthfulness and immense benevolence. Descartes certainly attributed to the human intellect the 'divine' power of producing clear and distinct ideas when nothing constrains its activity. By this power the mind, when it is 'in itself', produces truths which cannot be open to doubt, inevitable truths like the *cogito* and all logical and mathematical truths. Also the general properties of the corporeal nature can be grasped clearly and distinctly by the active power of mind, when the intellect "carefully and maturely" examines the matter.[41] Such knowledge, Descartes remarks, belongs to the mind alone and not to the combination of mind and body.

What could be inferred from the divine benevolence with respect to the tendencies of human mind? Purely intellectual thinking, although

---

[40] To Princess Elizabeth, 6 October 1643; CSMK, p. 272.
[41] Sixth Meditation; CSM II, p. 56.

equipping us with reasonably reliable laws and theories of the corporeal nature, does not give us enough help in orienting in our daily world and in taking care of our bodies. For these purposes, we have to see colours and smell odours, feel thirst and pain, and experience joy and hate. Now, for one thing, our perceptual ideas, sensations and emotions are necessarily confused, because they result from the way in which the body is affected, and "the body is always a hindrance to the mind in its thinking".[42] But in spite of being a hindrance to philosophers' and mathematicians' intellectual efforts, the fact that the mind is closely joined with the body is in Descartes' view also of utmost importance for us:

> If this were not so, I, who am nothing but a thinking thing, would not feel pain when the body was hurt, but would perceive the damage purely by the intellect, just as a sailor perceives by sight if anything in his ship is broken. Similarly, when the body needed food or drink, I should have an explicit understanding of the fact, instead of having confused sensations of hunger and thirst. For these sensations of hunger, thirst, pain and so on are nothing but confused modes of thinking which arise from the union and, as it were, intermingling of the mind with the body.[43]

Similarly, without perceptual ideas like shape, colour, touch, smell, and taste the external world would not be manageable to us. In this way the fact that our ideas do not resemble the corresponding motions in the body turns out to be to our benefit, suggesting for someone who, like Descartes, believes in God's infinite power that the innate tendencies producing them are expressions of divine benevolence.

To such benevolence Descartes counts first and foremost regular connections between body and mind. According to the famous explanation in the Sixth Meditation, a dropsical man desires to drink because certain movements in his brain necessarily cause this kind of desire; "every time this part of the brain is in a given state, it presents the same signals to the mind".[44] Although occasionally leading to harmful desires, such regularities are normally for our best, Descartes claims:

> [A]ny given movement occurring in the part of the brain that immediately affects the mind produces just one corresponding sensation; and hence the best system that could be devised is that it should produce the one

[42] Conversation with Burman; CSMK, p. 336.
[43] Sixth Meditation; CSM II, p. 56.
[44] CSM II, p. 59.

> sensation which, of all possible sensations, is most especially and most frequently conducive to the preservation of the healthy man.[45]

In spring 1646, Descartes wrote to Elizabeth:

> Our soul and our body are so linked that the thoughts which have accompanied some movements of our body since our life began still accompany them at present; so that if the same movements are excited afresh by some external cause, they arouse in the soul the same thoughts; and conversely, if we have the same thoughts they produce the same movements.[46]

Regular connections between bodily and mental events form an essential part of the Cartesian union.[47]

We may conclude that the causal adequacy principle (CA) applies to the case of body-mind causation. What is essential is a simultaneous change taking place in respective bodily and mental powers, like in body-body interaction. At the very moment something causes a change

---

[45] CSM II, p. 60.

[46] CSMK, p. 286. Similarly to Chanut in February 1647: "The soul's natural capacity for union with a body brings with it the possibility of an association between each of its thoughts and certain motions or conditions of this body so that when the same conditions recur in the body, they induce the soul to have the same thought; and conversely when the same thought recurs, it disposes the body to return to the same conditions" (CSMK, p. 307).

[47] We may speak of 'bridge laws'. To be sure, the regularities are not laws in some strict sense, but they should not be understood as mere correlations between brain events and mental events, either. They state genuine causal relations in the sense of the condition (CA); that is, they specify the proportional change in the respective tendencies of body and mind. In this respect they are like laws in Cartesian physics. In other respects, however, Descartes may have been committed to different standards of explanation for the psycho-physical relations and physical phenomena. For example, the systematization of a wide range of lower order generalizations by means of a few higher-order laws that is characteristic for physics may not apply to the bridge laws, and the explanations Descartes regards as proper in physics should certainly not include any reference to teleological aspects of phenomena. For an interesting discussion of these points, see Loeb, "The Mind-Body Union, Interaction, and Subsumption". Lilli Alanen has proposed a much more radical interpretation of Descartes' position: the causal interactions in the union escape all scientific explanation; see her *Descartes's Concept of Mind*, esp. chapters 2 and 6. Relying strongly on Descartes' letter to Elisabeth in May 1643, she takes his notion of mind-body union to be "like the notions of thought and extension in that it cannot be rendered more clear or distinct by further analysis" (p. 62); the notion simply "belongs to commonsense psychology and cannot, as such, be rendered any clearer by logical or scientific analysis" (p. 74). This seems to go too far from Descartes' intention in the letter. What he warns of is trying to explain interactions in the union in terms of the notions of mind and body, and of aiming in this way, by mere philosophical meditation, to reach an equally clear and distinct idea of the nature of the union. I cannot see why this advice should exclude all other kinds of metaphysical and scientific explanations of the interactions between mind and body.

in the power determining particular kinds of movements in the pineal gland, a corresponding change will occur in the power directing the formation of ideas in the mind.[48] No bodily property will be transferred to mind.[49] If something becomes transferred from body to mind, it is a certain amount of power appearing as particular tendencies in mind and the respective tendencies in body, and this kind of translation occurs simultaneously.[50] This answers the heterogeneity problem.[51]

---

[48] A surprisingly similar strategy for accounting causal interaction in a dualistic ontology has been suggested by W. D. Hart, entirely independent of any interpretation of Descartes' position; see *The Engines of the Soul*, chapters 6–11. Drawing on developments in the mathematical game and decision theory for quantifying beliefs and desires, as well as on Freud's theory of motivation, he argues for a conception of psychic energy appearing in quantities in the same way as physical energy. Assuming then that certain conservation principles apply to all forms of energy, the idea of causation between minds and bodies as a flow of energy arises in a natural way. For example, when light from an object arrives at the relevant region of convergence, it loses some of its energy and, at the same time, a corresponding increase in the mental energy of the 'disembodied' person takes place generating a visual perception and the related belief (p. 136). In other words, the psychic energy implicated in this experience comes from the energy lost by the light, and corresponding exchange takes place in the case of the other senses, so that "where there is a disembodied person in whom all five senses are working, there will be changes in matter or familiar sorts of energy" (p. 143). Hart's proposal amounts in all essential respects to the view I want to ascribe to Descartes.

[49] According to John Cottingham, Descartes' causal adequacy principle implies that "if there is some item X having the property F, then the cause which produced X, whatever it may be, must possess at least as much F-ness as is to be found in X itself" (*Descartes*, p. 49). This packs too much into the principle. How could Descartes have plausibly claimed that the cause of our mental items must possess at least as much the same property the mental items have, say as the cause of joy has 'joyfulness', when he repeatedly reminds of "the chief and most common mistake" of thinking that our ideas resemble, or conform to, things located outside us?

[50] "[T]he idea of heat, or of a stone, cannot exist in me unless it is put there by some cause which contains at least as much reality as I conceive to be in the heat or in the stone" (Third Meditation; CSM II, p. 28). Descartes emphasizes that the cause in such cases does not transfer any of its actual reality to the idea, but, he says, "in order for a given idea to contain such and such objective reality, it must surely derive it from some cause which contains at least as much formal reality as there is objective reality in the idea". In my interpretation, formal reality of the cause refers to its causal power and the objective reality of the idea to the power 'behind' this idea, that is, to the power of the tendency of the mind to form a representation of the causing object.

[51] It may be worth noting that Kant did not see heterogeneity as a problem. For instance in his Metaphysik Dohna lectures he remarks: "But it is wholly false that the effect must be homogeneous with the cause, for the concept of causality lies just in this, that something is posited by something *really* <*realiter*> *different*. E.g., contact of a string and sound. The interaction <*commercium*> between soul and body thus makes no difficulty" (*Lectures on Metaphysics*, p. 286 [AA 28:685]). I owe this reference to Olli Koistinen.

This kind of account of body-mind interaction also agrees with Marleen Rozemond's proposal to solve the dissimilarity problem and helps in understanding the model of causation she attributes to Descartes. The problem arises when we ask: from where do our sensory ideas get their representational contents? In the passage quoted from the *Comments on a Certain Broadsheet*, Descartes answers that the mind forms such ideas by means of the faculty innate to it, meaning apparently that the 'inner faculty' is causally responsible for the representational content of the ideas, as Rozemond rightfully argues.[52] The role of the bodily organs is, according to the passage, to give the mind 'occasion' for this kind of activity, and if this is interpreted as the body's causally affecting the mind, the complex causal model Rozemond proposes emerges. According to it, the innate capacity of the mind to produce a certain idea is prompted or triggered by a certain brain state, the triggering cause being here understood not as something that accounts for everything involved in the idea but only as something that activates a pre-existing intra-mental causal mechanism.[53] The bodily causes explain the occurrence of ideas but their representational content is due to the innate dispositions of the mind.

My proposal for accounting for the body-mind interaction in the Cartesian union accords nicely with Rozemond's. In accordance with the double-aspect model, particular ideas are caused by mental tendencies in the same sense as instantaneous tendencies in bodies determine them to move in a particular way, and the way the mind's tendencies become activated depends on changes in the bodily tendencies in accordance with the principle (CA). As Descartes remarks in the *Comments on a Certain Broadsheet*, what the senses present to the mind are merely corporeal motions, sounds etc., and everything "which we think of as being signified by them is represented to us by means of ideas which come to us from no other source than our own faculty of thinking".[54]

---

[52] According to her reading of the passage, "the fact that we have an idea of a particular type, with a particular representational content, on a particular occasion is explained by the mind's innate disposition to produce ideas under certain circumstances" ("Descartes on Mind-Body Interaction", p. 456). She offers further textual evidence for taking this to be Descartes' considered view (see pp. 457–458).

[53] "Descartes on Mind-Body Interaction", p. 461.

[54] CSM I, p. 305. Similarly in the *Principles of Philosophy*: "It can be proved that the nature of our mind is such that the mere occurrence of certain motions in the body can stimulate it to have all manner of thoughts which have no likeness to the movements in question. This is especially true of the confused thoughts we call sensations or feelings" (*Principles of Philosophy* IV.197; CSM I, p. 284).

Accordingly, both corporeal motions and the faculty of thinking are needed in the forming of ideas, the former serving as, as Descartes says, the "remote and merely accidental" cause giving the primary cause "occasion to produce its effect at one moment rather than another", and the latter as the "proximate and primary" cause without which anything cannot exist.[55]

Mind-body causation

According to Descartes, the mind affects the body by the power of the will. Every action by which the mind moves the nerves, he explains in a letter, is "simply the inclination of the will towards a particular movement", and the inflow of spirits to the nerves follows upon this inclination "because of the appropriate way the body is constructed" and "the union of the mind with the body".[56] Similarly, in *The Passions of the Soul* he writes that the activity of the soul consists "entirely in the fact that simply by willing something it brings it about that the little gland to which it is closely joined moves in the manner required to produce the effect corresponding to this volition".[57]

The notion of will refers in Descartes to innate dispositions of the mind to choose between judgments and actions:

> [The will] consists simply in the fact that when the intellect puts something forward for affirmation or denial or for pursuit or avoidance, our inclinations are such that we do not feel we are determined by any external force.[58]

Such inclinations, called volitions, are supposed to proceed directly from the mind's power alone, independently of any influence from the corporeal world.[59] Without going into the controversies concerning Descartes' notion of will, I will endorse the following interpretation based on the passage of the Fourth Meditation from which the above text is quoted; it presents how, according to Descartes, the notion of will should be conceived "in the essential and strict sense".

---

[55] CSM I, p. 305.
[56] For [Arnauld], 29 July 1648; CSMK, p. 357.
[57] *The Passions of the Soul* I.41; CSM I, p. 343.
[58] Fourth Meditation; CSM II, p. 39.
[59] *The Passions of the Soul* I.17; CSM I, p. 335.

Like all dispositions or tendencies of mind, volitions are created by God and express God's power; they are "divinely produced dispositions of my inmost thoughts".[60] Consequently, due to the divine truthfulness and benevolence, we are induced by the will to choose what we conceive as true and good. The more clearly we understand that "reasons of truth and goodness" point to a certain judgement or decision, the more we are inclined towards it, and the freer is our choice.[61] What the intellect finds as evidently true or good, the will cannot doubt but assents to it readily and without deliberation, as the case is when our mind is working entirely independently from corporeal influence. The will is then absolutely free, and it is this kind of freedom which forms the greatest perfection of man, so great indeed that we understand ourselves "to bear in some way the image and likeness of God".[62] In contrast, we are endowed with much less freedom in decisions which rely on more or less unclear and confused perceptual knowledge and emotions. In the extreme case of conflicting sensations and emotional passions the will finds no reason to decide in one way rather than another, and in such states of indifference, Descartes says, the will has to choose under the lowest degree of freedom.

On this reading, the freedom of the will means in Descartes ease or spontaneity in making decisions.[63] It excludes indifference in the strong sense that we could with equal ease and spontaneity opt for any alternative, even against a clear understanding of truth and goodness.[64]

---

[60] Fourth Meditation; CSM II, p. 39. To Elizabeth Descartes writes: "Before [God] sent us into the world he knew exactly what all the inclinations of our will would be; it is he who gave us them" (January 1646; CSMK, p. 282).

[61] Cf. axiom VII of the geometrical exposition of the *Meditations*: "The will of a thinking thing is drawn voluntarily and freely (for this is the essence of will), but nevertheless inevitably, towards a clearly known good. Hence, if it knows of perfections which it lacks, it will straightaway give itself these perfections, if they are in its power" (CSM II, p. 117).

[62] Fourth Meditation; CSM II, p. 39.

[63] Cf. Cottingham's reading: "Cartesian freedom, then, is not an absolute or contra-causal power; on the contrary it is the spontaneous assent that is irresistibly determined by the perceptions of the intellect" (*Descartes*, p. 150). I think the phrase 'irresistibly determined' is too strong. According to Descartes, the will is able, if needed, to refuse accepting even clear and distinct truths; see the next footnote.

[64] The letter to Mesland in February 1645, often quoted as evidence for the contrary, actually supports this reading. Descartes admits that the will has 'absolutely speaking' power of determining itself to one or other of two contraries with respect to any action, so that "it is always open to us to hold back from pursuing clearly known good, or from admitting a clearly perceived truth" (CSMK, p. 245). But he adds an important proviso: *provided we consider it a good thing to demonstrate the freedom of our will by*

Consequently, the Cartesian notion of freedom is also incompatible with the idea that an agent could have acted otherwise with equal freedom in the same circumstances.

In the mind-body interaction the will must encounter the power of passions which are disposed to render its decisions more or less difficult. According to *The Passions of the Soul*, the principal effect of emotions is that "they incite and dispose the soul to want the things for which they prepare the body".[65] However, due to the confusing nature of passions, there is always a danger of becoming misled by them, and the will, working with the intellect, offers independent power for controlling blind passions. In this respect, Descartes sees human individuals as uneven by nature: a weak will "constantly allows itself to be carried away by present passions", rendering the mind "enslaved and miserable", whereas the strongest minds are able to conquer their passions by the power of their will.[66] On the other hand, the extent to which the will is able to control the movements of the pineal gland depends on how the gland will be at the same time affected by other movements. Such affection is normal, but in the case of "very good and subtle minds […] the gland must be free from outside influence and easy to move", Descartes wrote to Meyssonnier.[67]

How does the causal adequacy condition (CA) apply to the relation between the human will and the movements of the pineal gland? In the case of 'weak minds', who choose only what their passions dictate, the answer is fairly straightforward: the condition holds true for the same reason as in the body-mind causation, for no extra power is added by the will to the causal chain from the gland through the relevant emotions and desires to the gland again. That is, the mind will lose to the gland the same amount of the power it gained when the gland caused a passion and the passion in turn a desire, so that the balance of power will prevail. And the relation between the mental power (power of the

---

doing so. What kind of freedom would be demonstrated in this way? Well, freedom as ease or spontaneity. For, Descartes remarks, it demands much more effort of the will to opt for something that is against reason than to follow the course perceived by the intellect the best. We have thus two ways of demonstrating the freedom of the will, the ease of assenting to the true and good and the difficulty of persuading ourselves to the opposite. In words of his letter, "a greater freedom consists either in a greater facility in determining oneself or in a greater use of the positive power which we have of following the worse although we see the better".

[65] *The Passions of the Soul* I.40; CSM I, p. 343.

[66] *The Passions of the Soul* I.48; CSM I, p. 347.

[67] To Meyssonnier, 29 January 1640; CSMK, p. 143.

will) and the power determining bodily movements should follow some regular pattern, for otherwise intentional control of the body would not be possible.[68] However, when I by my will intervene with the power of desires and change thereby certain tendencies of the gland, which would otherwise not happen, I will add new power into the causal chains in the material world, and this seems to create a problem: an increase in the power of certain tendencies of the gland will then occur without any balancing decrease in tendencies elsewhere in the material world, which would run against the causal adequacy principle.

There is, however, a way of saving the principle: the power of the will of human individuals could simply be included into the total power God is conserving in the world. This seems to be Descartes' position, as we can read from a couple of his letters to Elizabeth:

> I must say at once that all the reasons that prove that God exists and is the first and immutable cause of all effects that do not depend on human free will prove similarly, I think, that *he is also the cause of all the effects that do so depend*.[69]

> As for free will, I agree that if we think only of ourselves we cannot help regarding ourselves as independent; but when we think of the infinite power of God, we cannot help believing that all things depend on him, and hence that our free will is not exempt from this dependence. For *it involves a contradiction to say that God has created human beings of such a nature that the actions of their will do not depend on his*.[70]

According to the former letter, God is the cause of all the effects that also depend causally on human will, and the latter letter asserts that the volitions of human beings depend on God's power. These statements are in accordance with the view that the inclinations of human will

---

[68] How volitions succeed in producing particular movements of the gland depends on the way "nature or habit has joined certain movements of the gland to certain thoughts", Descartes says in the *Passions* (I.44; CSM I, 344). I am able to lift my hand at will, because my volition is naturally connected to a certain kind of movement in the gland, which movement in turn drives the spirits to the muscles and brings about the desired effect (I.43). But I am not able to enlarge my pupils simply by willing it. And, in contrast to natural laws in physics, many natural connections between volitions and bodily states can be changed and new ones created by training. Strictly speaking, in the view I suggest, what the bridge laws state are connections between mental tendencies and tendencies in the pineal gland to move, so that what the volitions directly cause in the gland are not motions but tendencies to move, or rather changes in such tendencies. These effects are accomplished by the will immediately, by simultaneous causation.

[69] To Elizabeth, 6 October 1643; CSMK, p. 272, my emphasis.

[70] To Elizabeth, 3 November 1645; CSMK, p. 277, my emphasis.

express or represent God's power. This gives us reasons for including them, together with the tendencies that cause movements in the material world and the tendencies in our minds that cause sensations and emotions, into the total causal power of the universe. Accordingly, Descartes' general conservation law should be taken to cover all power existing in the extended and non-extended world, including the power of the human will, so that all changes in this power in particular occasions, including those caused by our free volitions, must take place in accordance with the principle (P3) of power balance.[71] This would be enough for making the causal adequacy principle (CA) hold true of all kinds of interaction in the mind-body union.

The reason why this is not incompatible with the idea of free human will becomes clear on the reading of the Cartesian notion of freedom explained above. In the freedom passage of the Fourth Meditation, Descartes definitely denies that the divine origin of the dispositions of our will would deprive their freedom,[72] and he repeats the point to Elizabeth as follows:

> Before [God] sent us into the world he knew exactly what all the inclinations of our will would be; it is he who gave us them, it is he who has arranged all the other things outside us so that such and such objects would present themselves to our senses at such and such times, on the occasion of which he knew that our free will would determine us to such or such an action; and he so willed, but *he did not thereby will that our will should be constrained to the choice in question*.[73]

I take it to be Descartes' view that our volitions will elicit as good decisions as the circumstances permit, not in spite of expressing God's power but *because of* doing so.

Still other questions concerning the intelligibility of mind-body causation remain to be answered. One is concerned with the spatial contiguity which his critical commentators thought to be necessary to

---

[71] This accords with Hart's suggestion for explaining how what he calls 'disembodied persons' move the related bodies: "How might common sense suppose energy to be converted along the course of the causation of bodily movements by beliefs and desires? One supposition seems obvious: begin with quantities of conviction and desire; these, or at least the second, will be expanded, but the books will be balanced by a part of the kinetic energy manifested in the movements of the body" (*The Engines of the Soul*, p. 170).

[72] "Neither divine grace nor natural knowledge ever diminishes freedom; on the contrary, they increase and strengthen it" (CSM II, p. 39).

[73] To Elizabeth, January 1646, CSMK, p. 282, my emphasis.

all causation, and Descartes himself to causation in the material world. Apparently the doctrine of the *co-extensionality of mind with body* was meant to meet the criticism at this point.

Descartes' first attempt to clarify it, with the analogy of the scholastic account of heaviness, captures some interesting features of mind-body causation but fails in certain decisive respects.[74] On this account, the heaviness of a body, in virtue of which the body falls down, is thought as distributed throughout the whole body, exercising all of its force in any part of it, and similarly, Descartes suggests, the mind can be under-stood to be co-extensive with the body, "the whole mind in the whole body and the whole mind in any one of its parts".[75] What the analogy forcefully brings forward is the immediate relation between the mind and bodily movements it is supposed to cause, that is, the simultaneity of the cause with the effect. This is an important feature of the Cartesian union when the bodily part is seen as the pineal gland only, but not of 'the whole mind in the whole body', although that is what Descartes wants the analogy to illustrate to us. Moreover, in other respects the scholastic model does not help in understanding the nature of causation and causal power in the mind-body union, mainly because the idea of force by which the heaviness is supposed to move the body downwards in the scholastic model is entirely different from the idea of efficient cause Descartes claims to be involved in the relation between volitions and brain events. And what is lacking in particular is the idea of a regular connection between the cause and the effect upon which Cartesian explanations are essentially built.[76]

Interestingly, in his last letters Descartes attempts to clarify the question of how mind can be 'extended' in terms of its causal power. In April 1649 he wrote to More:

---

[74] The analogy is used in the Sixth Replies (CSM II, p. 297), and in the letters to Hyperaspistes August 1641 (CSMK, p. 197), to Princess Elizabeth, May 1643 (CSMK, p. 219), and for Arnauld, 29 July 1648 (CSMK, p. 358).

[75] Sixth Replies; CSM I, p. 297.

[76] Descartes himself expresses reservations concerning the heaviness analogy. To Elizabeth he regretted it to be 'lame' (CSMK, p. 228), and to Arnauld he wrote that the question of how the mind can set body in motion "is one of those self-evident things which we only make obscure when we try to explain them in terms of other things" (CSMK, p. 358)—resorting however to the heaviness analogy once again, actually the last time.

> [M]y mind cannot be more or less extended or concentrated in relation to place, in virtue of its substance, but only in virtue of its power, which it can apply to larger or smaller bodies.[77]

He explained further to More that the mind's power "manifests itself, or can manifest itself, in extended beings".[78] How should the idea that the power of mind 'applies to' or 'manifests itself' in bodies be understood? Obviously, the power manifests itself as corporeal motions, but what should this mean? The present interpretation offers a straightforward answer: exercising mind's power on a body results in a change in the power by which corporeal movements are determined; in this way it manifests itself in the body. In causal interaction the mind is related to the body in the same way as another body is in contact with that body, and in this way it becomes 'extended' in a quite natural sense. Most importantly, in either case the relation between cause and effect is not primarily based on spatial contact but on an immediate change in the powers operating in them. In fact, just one event takes place in mind-body causation, its effect-aspect manifesting itself as spatially identifiable properties (movements) and the cause-aspect being realized as an imperceptible change in mental states. In this way, the event 'ties' the mind firmly to the extended world.[79]

Let us see next what kind of implications the account of the mind-body causation suggested here has for the much discussed question of how divine power and human will relate in causing motions in the

---

[77] CSMK, p. 375.

[78] To More, August 1649; CSMK, p. 381.

[79] This interpretation helps us to deal with what Paul Hoffman has claimed to be "one of the most intriguing passages in the entire Cartesian corpus". He refers to the second paragraph of the *Passions* where Descartes writes that "we should recognize that what is a passion in the soul is usually an action in the body". This follows from the equation of actions and passions in the first paragraph as "one and the same thing" which just refers to two diverse subjects (CSM I, p. 328). But how can Descartes, in view of his dualism, take anything occurring in the mind to be *the same thing* as what occurs in the body? Hoffman suggests that Descartes' characterization of the mind-body union as a 'substantial union' should be taken in the literal sense of referring to its own kind of substance different from mind-substances and body-substances, a substance that has special kind of non-mental and non-bodily 'straddling modes'; see his "Cartesian Passions and Cartesian Dualism". My interpretation provides a much simpler and, I think, more plausible answer: actions and passions in the union really are two aspects of one and the same event, namely a change in the proportional amount of two quantities of power, that is, a change in two aspects or manifestations of one and the same power: the power of God.

corporeal world. If God is the efficient cause of all motion in the corporeal world, as Descartes claims in the *Principles of Philosophy* II.36, how can also the human mind generate movements in the pineal gland? The double-aspect model of causation provides again a simple answer to this duplication problem. What we have are certain tendencies in the gland which represent God's power and determine particular movements there, and certain innate tendencies, volitions, of the mind. Then, by the power of such volitions, the mind causes an increase in the power of some of the gland's tendencies, which immediately results in particular kind of movements in the gland. By causing changes in the gland's dispositions, the mind is the cause of the resulting movements of the gland, whereas God is the cause of them in the sense of creating and maintaining bodily tendencies. Both aspects of the causal relation are needed, and together they are sufficient for the bodily effect so that no duplication of sufficient causal power is involved.[80] Actually, if also human volitions are interpreted as expressions of God's power, as I suggest, God will be the cause in both senses, which entirely removes the question of duplication.

However, a different sort of problem arises. If the physical world is thought to be causally closed, then for every change in the tendencies of some body there must be a proportional change elsewhere in the

[80] In the scholastic terminology Descartes employs in the *Principles of Philosophy* II.36, God is the 'primary cause' of the brain movements in virtue of maintaining certain kinds of tendencies of the gland, and the mind its 'secondary cause' by affecting these tendencies in a particular way. The final effect is produced in God's cooperation with the human mind in a way highly reminiscent of the scholastic doctrine of divine concurrence. The double-aspect model of causation may hence be of help in advancing the concurrentist interpretation of Descartes' view of God's causal activity in the created world, not only because it clarifies the duplication problem but also because it reconciles Descartes' metaphysics with his physics. For a particularly relevant version of the concurrentist reading, see Helen Hattab's "Concurrence or Divergence? Reconciling Descartes's Physics with his Metaphysics". Although mainly concerned with the latter problem, Hattab briefly remarks how in Descartes physical and mental causes seem to be on a par in that "both rely on God for their continued existence and fundamental properties (rectilinear motion and goodness), whereas their dispositions cause them to diverge from these" (p. 74). In this way God is the author of our actions in the sense that the divine will and our wills 'concur' with each other to produce good actions, and similarly "God concurs with the second law of nature to produce rectilinear motion, which is then diversified by the concurrence of the existing material conditions" (pp. 74–75). Hattab defends the concurrentist reading against the criticism of Geoffrey Gorham who sees causal overdeterminism as a better solution than concurrentism to the duplication problem; see his "Cartesian Causation: Continuous, Instantaneous, Overdetermined". In view of the double-aspect causation, it is unnecessary to assume overdeterminism; instead, there seems to be much that favours concurrentism.

corporeal system, in accordance with the requirement (CA). But in the mind-body causation, an increase of the power of certain tendencies in the pineal gland will be balanced by a corresponding decrease in the power of mental dispositions, desires, and volitions, and the extended conservation principle does not permit any more reduction of power elsewhere. Thus, in this extended system we cannot assume that whenever a volition causes a movement in the body, a corresponding loss of motion, and thus a reduction in power, occurs somewhere else in the corporeal network. Similarly, in the body-mind causation a loss in bodily power may occur without a corresponding increase elsewhere in the material world, for instance in the case of perception which does not lead to any desire or other cause of bodily motion. It seems that to save the present interpretation the closure assumption should be rejected.

Now, there is no clear textual evidence that Descartes would have adhered to it. After a careful examination of the matter, Daniel Garber arrives rather to the contrary view: "The overwhelming impression that one gets from the texts is that Descartes just was not very concerned about reconciling his interactionism with his conservation law."[81] To be sure, the conservation law is taken in Descartes' original sense to cover the total amount of motion in the corporeal world. According to Garber, the textual evidence strongly suggests that in Descartes' view no closure problem exists, for he "may never have been committed to the position that his conservation law holds universally and may have allowed for the possibility that animate bodies lie outside the scope of the laws that govern inanimate nature".[82] Garber designates the following passages from the *Principles of Philosophy* concerning changes in the quantity of motion as an important support for this conjecture:

> Now there are some changes whose occurrence is guaranteed either by our own plain experience or by divine revelation, and either our perception or our faith shows us that these take place without any change in the creator; but apart from these we should not suppose that any other changes occur in God's works, in case this suggests some inconstancy in God.[83]
>
> All the particular causes of the changes which bodies undergo are covered by this third law—or at least the law covers all changes which are themselves corporeal. I am not here inquiring into the existence or nature

[81] *Descartes Embodied*, p. 150.
[82] *Ibid.*
[83] *Principles of Philosophy*, II.36; CSM I, p. 240.

> of any power to move bodies which may be possessed by human minds, or the minds of angels.[84]

Based on this and other textual evidence Garber claims that Descartes meant the conservation law of motion to hold only for motions whose efficient cause is God and not for those caused by the human will:

> Now, when God causes motion, the motion He causes must observe the conservation law. But there is no reason at all to impose similar constraints on *finite* and *imperfect* causes of motion. That is, even though finite, imperfect minds may act in some lawlike way, deriving from their finite and imperfect natures, the motion *they* cause need not satisfy the conservation principle. *They* may add or subtract motion from the world, even if *God* cannot.[85]

On Garber's interpretation, Descartes' conservation principle governs only purely mechanical systems with no interventions of finite minds, but animate bodies, capable of being affected by minds, can violate it.

It certainly is the case that Descartes, in deriving his laws of motion in *The World* and the *Principles of Philosophy*, excluded from their range motions caused by the power of human minds. "I am reserving this topic for a treatise *On Man* {which I hope to produce}", Descartes writes in the latter.[86] Unfortunately, his wish remained unfulfilled, and we can only make conjectures about his approach. But consider what would happen to the quantity of motion caused by a human mind in the body, if the conservation law governed all movements in the material world, including those that take place in human bodies. According to the *Principles of Philosophy* II.36, God always preserves *the same amount of motion* in the material universe as he put there at the creation, which implies that the quantity added by a finite mind falls outside God's preservation, so that the movements produced by human power in the body would not be governed by the ordinary laws: they would not persist nor would the law of proportionality hold for the causal relations it generates.[87] This conclusion will be avoided by extending the conservation

---

[84] *Principles of Philosophy*, II.40; CSM I, p. 242.

[85] *Descartes Embodied*, p. 165.

[86] *Principles of Philosophy* II.40; CSM I, p. 242. The bracketed phrase appears only in the French translation.

[87] Garber observes this problem when quoting the letter to More, August 1649; see *Descartes Embodied*, p. 166, n. 70. Descartes writes that the power causing motion may be the power of God himself preserving "the same amount of transfer in matter as he put in it in the first moment of creation", or the power of a created mind. Garber remarks that the literal reading of the phrase quoted implies that God, because he always

principle to comprehend also inanimate bodies, and this is what Descartes most plausibly had in mind—at least this kind of approach throws light to several problems involved in the Cartesian idea of the mind-body union, as I have argued above. But a definite price must be paid: we have to reject the idea of the causal closure of the material world and accept that in certain circumstances even inanimate bodies are not governed by the laws of corporeal motion. Whether Descartes would have accepted this remains an open question.

Concluding remarks

Together, the double-aspect model of causation and the principle of conservation of God's active power taken to cover not only the motions of corporeal reality but also changes in the human mind provide interesting possibilities for approaching certain longstanding problems in Descartes' metaphysics: problems arising from the heterogeneity of mind and body, the dissimilarity between perceptions and their objects, the apparent duplication of divine and human power in voluntary actions, and the assumption of the causal closure of the material world. In light of this interpretation—according to which all causality, not only between bodies but also between mental states and between mental and bodily states, is founded in the same way on God's immutable power—Descartes' defence of both the doctrine of strict dualism and the idea of causal interaction in the mind-body union seems to be a perfectly intelligible project.

Of course this leaves unanswered the question of how the tendencies behind movements and changes are accomplished by God. When More asked how we can conceive that God is able to act on extended bodies, Descartes replied:

---

preserves the same amount of motion as in the beginning, would fail to preserve in the next moment the motion added by a finite mind in one moment. This would go, Garber argues, against the idea, stated in *Principles* II.39, that God conserves motion at every moment without regard to what it was a moment ago; and because this idea of continuous re-creation plays such a central role in the derivation of the laws of motion, we may dismiss the literal reading of the 'same amount of transfer as in the beginning' to avoid the absurd idea that God destroys motion added by human will. But unlike Garber's suggestion, the literal reading agrees with the most fundamental presumption concerning God's immutable nature, the presumption that there can be no change in the total power conserved in the continuous re-creation. This is something Descartes simply could not give up—and did not need to, on my interpretation.

> Of course I do not think that any mode of action belongs univocally to both God and his creatures, but I must confess that the only idea I can find in my mind to represent the way in which God or an angel can move matter is the one which shows me the way in which I am conscious I can move my own body by my own thought.[88]

This is in agreement with his view that our mental activity with respect to body is part of the power by which God controls transactions in the extended realm.[89] We know by everyday experience that there exist, as a matter of fact, certain connections between our mental power and tendencies in the body, as well as between our perceptions or other passive ideas and external objects, and scientific experiments may further advance our knowledge of such relations. But experience can never reveal to us *how* God has accomplished the tendencies in minds and bodies and the laws connecting them. This remains a secret. This mystery, however, is peculiar not only to the Cartesian mind-body union but pertains to causality in general. W. D. Hart replies to the objection of how electromagnetic energy in light can be converted to a quantity of psychic energy:

> That we cannot answer. But then neither can the orthodox materialist. […] We all know that when an atom bomb explodes, some matter is converted to energy. But how? As far as one can see, we do not know. We do seem to know the rate at which one exchanges to the other, and that seems to make us feel justified in talking about mass-energy. Analogously, we imagine that electromagnetic energy in light converts at a fixed rate to conviction in the disembodied. That should make us feel justified in thinking that there could be a more fundamental sort of energy, now perhaps physical but with the capacity to become mental. Since we have other reasons for thinking that the disembodied person is

---

[88] To More, 15 April 1649; CSMK, p. 375.

[89] Garber concludes from the passage that mind-body causation forms the paradigm for all causal explanation for Descartes. It is, in Garber's view, the ultimate model in terms of which all causal interaction, including body-body causation, must be understood. He admits that this, if true, makes it virtually impossible to understand how Descartes conceived of body-mind causation (*Descartes Embodied*, chapter 8)—and, we may add, also mind-mind causation. Indeed, if we follow, as Garber does, the account of body-body causation Descartes offers in the *Principles of Philosophy* and in other writings on physics, body-mind and mind-mind interactions remain inconceivable, but if we take Descartes' line of reasoning concerning body-body causation to apply also to the field of the mind-body union, it seems possible to reach a unified theory covering equally all kinds of interaction.

> nonetheless not physical […], there is no reason to be more embarrassed by our ignorance than the orthodox materialist is by his.[90]

Ever since the first commentators, however, causation in the union has been commonly held incomprehensible, unlike Descartes' explanation of physical causal phenomena. According to some recent scholars, Descartes himself felt uneasy with his dualistic metaphysics in accounting for human behaviour. John Cottingham claims that Descartes was driven by a reductionist vision in his scientific investigations of animal and human behaviour, which led him "progressively to banish the soul from science",[91] and Gary Hatfield speaks of Descartes' "program of accounting for as much of the psychology of the sensitive soul as possible by corporeal processes alone".[92] Both Cottingham and Hatfield refer to reduction as a *materialistic* reduction, that is, explanation of mental events in terms of physical or physiological laws.

But why should have Descartes felt being obliged to such a manoeuvre radically in conflict with his dualism? Certainly he seriously aimed at scientific explanations of mental phenomena, but should he thereby be driven to materialistic reduction? His ardent interest in physiological processes, witnessed in particular by *The Passions of the Soul*, need not be thought of as a sign of reductionism but rather as an essential part of his project of searching for psychophysical bridge laws. It is difficult to see what Descartes would have gained by a reductionist attempt to explain mental phenomena in terms of purely physical laws. After all, he did not see any more 'mystery' in God's work in establishing causal relations between mind and body as between bodies. And, most importantly, he would have lost the possibility of accounting for the important teleological aspect of human nature: that our passions, beliefs, emotions, and desires are meant to be conducive to the well-being of

---

[90] *The Engines of the Soul*, p. 149. Cf. Kant: "[T]he heterogeneity of the effect with the cause makes not the least difficulty, but rather how substances in general can act upon one another makes the difficulty, be they homogeneous or heterogeneous. […] Once we assume the existence of the soul, then how it acts upon the body makes no further difficulty" (Metaphysik K_2 in *Lectures on Metaphysics*, p. 399 [AA 28:758]). I owe this reference to Olli Koistinen.

[91] "Cartesian Dualism: Theology, Metaphysics, and Science", p. 253. Cottingham speaks of the Cartesian union as "that mysterious soul-body hybrid that is the human being" (p. 257).

[92] "Descartes's Physiology and its Relation to His Psychology", p. 350.

our body and our whole self.[93] We can hardly think of Descartes, who definitely denies that our body, taken as a mere mechanism, would have any kind of well-being or health as its end, as failing to see materialistic reduction as an unreasonable project.[94]

[93] E.g. in the Sixth Meditation: "[T]he fact that some of the perceptions are agreeable to me while others are disagreeable makes it quite certain that my body, or rather my whole self, in so far as I am a combination of body and mind, can be affected by the various beneficial or harmful bodies which surround it" (CSM II, p. 56). Our beliefs, related to sensations and perceptions, are considered similarly to be conducive for the well-being. In *The Passions of the Soul* Descartes says that the natural function of the main passions of love, hatred, desire, joy, and sadness is "to move the soul to consent and contribute to actions which may serve to preserve the body or render it in some way more perfect" (II.137; CSM I, p. 376).

[94] For discussion of different versions of this essay, I would like to thank the members of the Rationalist Circle of the Department of Philosophy at the University of Turku, in particular Olli Koistinen, Valtteri Viljanen, Arto Repo, and Timo Kajamies.

CHAPTER SEVEN

DE NOVO CREAT: DESCARTES ON ACTION, INTERACTION, AND CONTINUOUS CREATION

Timo Kajamies

Introduction

> [Burman] But a builder is the cause of a house, yet for all that the house is not like him.
> [Descartes] He is not the cause of the house, in the sense in which we are taking the word here. He merely applies active forces to what is passive, and so there is no need for the product to be like the man.[1]

In conformity with a Galilean law of motion, René Descartes holds that bodies have a tendency or *power* to persist in their actual state.[2] As in seventeenth-century philosophy in general, Descartes' system raises questions as to how the tendency should be explained.

Now, Descartes regards tendencies as actions that signify some effort.[3] It seems, then, that bodies should carry out some efforts—have some activity—in order to obey the fundamental conservation laws. However, bodies appear to be totally inactive in Descartes' philosophy. Bodies are to be understood in terms of geometrical properties—ultimately in terms of extension[4]—and these properties themselves can hardly generate any effort or power. In fact it is obvious that they *cannot* in themselves generate any action. A difficult question arises at this point: how can passive Cartesian bodies have the tendencies that require activity needed for them to obey the conservation laws?

It is obvious that Descartes believes that his philosophical system allows talk about active forces. The dialogue between Burman and

---

[1] Descartes' conversation with Burman, 16 April 1648; CSMK, p. 340; AT V, p. 156.
[2] *Principles of Philosophy* II.43; CSM I, p. 243; AT VII, p. 66.
[3] See *The World* chapter 7; CSM I, p. 96; AT XI, p. 44; and AT XI, p. 84.
[4] *Principles of Philosophy* I.53; CSM I, p. 210; AT VIIIA, p. 25.

Descartes above suggests that, according to Descartes, a builder applies active forces to passive matter, and in this way produces a house. The builder, who is a mental being, can impart active force on material things such as hammers. The movement of the hammer then has effects on nails which have effects on planks and so on. In his reply to Burman, Descartes thus seems to accept there being causal sequences that are initiated by a mental being and result in further causes and effects in the material world. Moreover, the dialogue between Burman and Descartes also suggests that, according to Descartes, causes and effects do not need to be similar in nature.

Descartes also holds that something mental, such as an idea, can be an effect of activity residing in the material world. For instance, he argues that because our faculty of sensory perception is completely passive and God is not a deceiver, our sensory ideas are products of the activity of corporeal things.[5]

Finally, when a body makes another body move, it is of course very intuitive to suppose that the cause-body must display some activity. Or, if the cause-body has been set into motion by yet another body, the source of the activity may lie further down the causal chain, but some activity must be displayed somewhere in the causal ancestry of the body that is set into motion.

Activity is, then, central to causality. This is a very plausible view; it is hard to see how anything could cause anything, if nothing had any activity required in initiating causal sequences. However, it is notoriously difficult to provide a reading of Descartes' philosophy in a way that allows there to be the kind of causal relations Descartes would want to allow.

I will begin by setting the stage by discussing some of Descartes' key ideas about causality concerning the material world. Then, after a short digression into Descartes' ontology, I shall move on to formulate the central principle Descartes holds to govern causal relations. After presenting two unsuccessful formulations of Descartes' causal principle, I shall suggest a third formulation and argue that it may enable us to construct a model that would allow those causal relations that Descartes clearly wants to endorse. The key concept in the third formulation of Descartes' causal principle is that of an active power, whose metaphysical basis is God. Namely, Descartes holds that active power is imparted to finite entities by God, who is the primary cause and constant creator

[5] Sixth Meditation; CSM II, p. 55; AT VII, p. 79.

of everything.[6] This is quite an obscure doctrine, but it might provide a way to formulate Descartes' causal principle in a way that allows those causal relations that Descartes accepts.

Causality concerning the material world: some starting points

Let me start by a lengthy passage that deserves to be quoted in full. In *Principles of Philosophy*, Descartes writes:

> After [the] consideration of the nature of motion, we must look at its cause. This is in fact twofold: first, there is the universal and primary cause—the general cause of all the motions in the world; and second there is the particular cause which produces in an individual piece of matter some motion which it previously lacked. Now as far as the general cause is concerned, it seems clear to me that this is no other than God himself. In the beginning {in his omnipotence} he created matter, along with its motion and rest; and now, merely by his regular concurrence, he preserves the same amount of motion and rest in the material universe as he put there in the beginning. Admittedly motion is simply a mode of the matter which is moved. But nevertheless it has a certain determinate quantity; and this, we easily understand, may be constant in the universe as a whole while varying in any given part. Thus if one part of matter moves twice as fast as another which is twice as large, we must consider that there is the same quantity of motion in each part; and if one part slows down, we must suppose that some other part of equal size speeds up by the same amount. For we understand that God's perfection involves not only his being immutable in himself, but also his operating in a manner that is always utterly constant and immutable. Now there are some changes whose occurrence is guaranteed either by our own plain experience or by divine revelation, and either our perception or our faith shows us that these take place without any change in the creator; but apart from these we should not suppose that any other changes occur in God's works, in case this suggests some inconstancy in God. Thus, God imparted various motions to the parts of matter when he first created them, and he now preserves all this matter in the same way, and by the same process by which he originally created it; and it follows from what we have said that this fact alone makes it most reasonable to think that God likewise always preserves the same quantity of motion in matter.[7]

---

[6] See e.g. the letter to Mersenne, 27 May 1630; CSMK, p. 25; AT I, pp. 151–152; and Third Meditation; CSM II, p. 33; AT VII, p. 49.

[7] *Principles of Philosophy* II.36; CSM I, p. 240; AT VIIIA, p. 61. The phrase within curly braces is from the French version of the *Principles*.

The above passage contains several ideas that are of utmost importance when trying to figure out what kind of theory of causality Descartes might have. These include at least the following:

(1) God is immutable;
(2) God is the primary and universal cause of motion; in addition to this there are what Descartes calls 'particular causes of motion';
(3) God preserves the total quantity of motion (quantity of motion being size times speed) by his immutable concurrence, the same process by which he originally created matter;
(4) The quantity of motion in matter as a whole remains constant, but this quantity can be divided in different ways in parts of matter;
(5) Motion is a mode of matter.

The theses above have to do with motion. In fact, Descartes accepts a reductionist view, according to which all changes in the material world ultimately are changes of motion.[8] For instance, when formulating his 'third law of motion', Descartes says:

> All the particular causes of the changes which bodies undergo are covered by this third law—or at least the law covers all changes which are themselves corporeal.[9]

Furthermore:

> The matter existing in the entire universe is thus one and the same, and it is always recognized as matter simply in virtue of its being extended. All the properties which we clearly perceive in it are reducible to its divisibility and consequent mobility in respect of its parts, and its resulting capacity to be affected in all the ways which we perceive as being derivable from the movement of the parts.[10]

Movements of parts of matter are thus the fundamental changes occurring in the material world.

Clearly, in order to understand what causality requires within the material world on the one hand, and—if possible at all—between the mental and the material world on the other hand, we need to understand what is required for a part of matter to move. We need a clear view of

[8] Cf. Clatterbaugh, *The Causation Debate in Modern Philosophy*, pp. 28–29.
[9] *Principles of Philosophy* II.40; CSM I, p. 242; AT VIIIA, p. 65.
[10] *Principles of Philosophy* II.23; CSM I, p. 232; AT VIIIA, p. 52.

Descartes' metaphysics of causality. However, in order to zero in on this metaphysics, a short discussion of Descartes' ontology is helpful.

An overview of Descartes' ontology

Descartes' accepts a substance–property ontology. There are two exclusive classes of substances: minds and bodies. Minds are intellectual, thinking things, and bodies are material, extended things.[11] Properties in Descartes' ontology—the term 'property' being used in a very general sense here—are attributes, modes, or qualities.[12]

Descartes also accepts what could be called an ontological hierarchy. Namely, reality he says, "admits of more and less". God, an infinite substance, is "more of a thing" than a finite substance. And a finite substance is a thing to a greater extent than its modes.[13]

In this chapter I shall use the term 'attribute' to stand for what Descartes calls a 'principal attribute', a property that constitutes the essence of a substance.[14] There are only two principal attributes: thought for minds and extension for bodies. He uses the term 'mode' to stand for an accidental property, a 'modification' of a substance. And when a mode enables us to designate a substance as being of a certain kind, the term 'quality' is employed.[15] Using the term 'entity' as a generic term that stands for all substances, attributes and modes, we now get the following ontological hierarchy of entities (the level of reality decreases by each step down):[16]

Entities
1. *Substances:*
   a. An infinite substance: God;
   b. Finite substances: finite minds and bodies;
2. *Properties:*
   a. Principal attributes: thought and extension;
   b. Modes and qualities.

---

[11] E.g. *Principles of Philosophy* I.48; CSM I, pp. 208–209; AT VIIIA, p. 23.
[12] See e.g. *Comments on a Certain Broadsheet*; CSM I, p. 297; AT VIIIB, p. 348. Descartes sometimes overlooks the distinctions between these kinds of properties (see *Principles of Philosophy* I.56; CSM I, p. 211; AT VIIIA, p. 26).
[13] Third Set of Objections with Replies; CSM II, p. 130; AT VII, p. 185.
[14] *Principles of Philosophy* I.53; CSM I, p. 210; AT VIIIA, p. 25.
[15] See *Principles of Philosophy* I.53; CSM I, pp. 210–211; AT VIIIA, p. 25.
[16] Cf. Schmaltz, "Deflating Descartes's Causal Axiom", pp. 4–5.

A substance is more real than a property, since substances do not "depend on any other thing for its existence".[17] Strictly speaking, this applies only to God—the one and only absolutely independent entity. All finite substances need God's concurrence to exist.[18] However, finite substances are ontologically independent of other finite substances. Hence, they have a greater amount of reality than properties, since properties cannot exist separately from some substance.[19]

The importance of the above hierarchy may not be clear at this point, but it will become central later on. We shall see that the ontological hierarchy is of utmost importance when reconstructing Descartes' principles that govern causal relations.

The Causal Reality Principle: the first version

It is clear that Descartes believes there are causal relations both within a single degree or level of reality, and between the levels. For instance, a moving finite body can set another finite body in motion, and also God has effects in the material world. For the time being, let me concentrate on the former case.

The question to be asked now is, what is metaphysically required in order that a causal relation may take place in the material world? A central role in answering to this question is played by what can be called Descartes' *Causal Reality Principle*. Here is one formulation of it:

> Now it is manifest by the natural light that there must be at least as much {reality} in the efficient and total cause as in the effect of that cause. For where, I ask, could the effect get its reality from, if not from the cause? And how could the cause give it to the effect unless it possessed it? It follows from this both that something cannot arise from nothing, and also that what is more perfect—that is, contains in itself more reality—cannot arise from what is less perfect.[20]

Here Descartes says that a cause must be at least as perfect as its effect—it must possess at least as much reality as its effect. Now, what is meant by this? At least one thing seems to be clear: for Descartes, the notion of possessing some amount of reality is more fundamental than

---

[17] *Principles of Philosophy* I.52; CSM I, p. 210; AT VIIIA, p. 24.
[18] *Ibid*.
[19] E.g. Sixth Set of Replies; CSM II, p. 293; AT VII, p. 435.
[20] Third Meditation; CSM II, p. 28; AT VII, pp. 40–41.

the notion of causality; the notion of causality is explicated through the notion of reality. But we need a more specific view of what possessing reality is all about.

To start with, Descartes mentions it as an axiom that "There is nothing in the effect which did not previously exist in the cause".[21] This at least suggests that Descartes holds an influx theory of causality, according to which and entity is a cause only if it has in itself everything that it produces in another entity by communication;[22] in a causal relation, then, an entity passes properties to another entity. This hypothesis seems to find support from the following passage as well:

> The fact 'that there is nothing in the effect which was not previously present in the cause, either in a similar or in a higher form' is a primary notion which is as clear as any that we have; it is just the same as the common notion 'Nothing comes from nothing'.[23]

Let us not worry, for the time being, about the qualification that a cause may contain properties "in a higher form". Let me first ask what Descartes means when he says that there is nothing in the effect which was not previously present in the cause, provided that we only talk about properties present in the cause in a similar form as in the effect.

The case of a finite body making another finite body move provides a useful example. When Descartes formulates what he calls the "third law of motion", he discusses a case in which a body collides with another body.[24] Descartes holds that in this case the body acting as a cause "loses a quantity of motion equal to that which it imparts to the other body". Now, motion is a mode of a body, and when a body moves another body, it must have at least as much of that mode as the body it imparts motion to has. This suggests that, according to Descartes, a cause must possess at least as much of the relevant property as it imparts to its effect when a causal relation takes place. But this, it seems, cannot be the whole story, since this view does not allow there to be, for instance, causal flow from minds to bodies. Provided that all change in the material world reduces to changes in motion, how could a mind have anything to do with these changes since no mind has the property of

---

[21] Fifth Set of Replies; CSM II, p. 252; AT VII, p. 366.
[22] Cf. Radner, *Malebranche: A Study of a Cartesian System*, p. ii.
[23] Second Set of Replies; CSM II, p. 97; AT VII, p. 135.
[24] See *Principles of Philosophy* II.40; CSM I, p. 242; AT VIIIA, p. 65.

motion? Unless, of course, a mind could have the property of motion "in some higher form", or as Descartes says, 'eminently':

> As for all other elements which make up the ideas of corporeal things, namely extension, shape, position and *movement*, these are not formally contained in me, since I am nothing but a thinking thing; but since they are merely modes of a substance, it seems possible that they are contained in me *eminently*.[25]

Given that properties, such as motion, can also be possessed in the cause 'in a higher form' than in the effect, the picture becomes a bit complicated. Some conceptual distinctions must be made in order to obtain a clearer view. We must distinguish between *objective, formal*, and *eminent* inherence. Descartes writes in the Second Set of Replies:

> Whatever exists in the objects of our ideas in a way which exactly corresponds to our perception of it is said to exist *formally* in those objects. Something is said to exist *eminently* in an object when, although it does not exactly correspond to our perception of it, its greatness is such that it can fill the role of that which does so correspond.[26]

In Descartes' terminology, formal inherence means actual inherence.[27] And "whatever exists in the objects of our ideas" constitutes what Descartes calls the "objective reality of an idea".[28] Now, objective reality is very plausibly interpreted as the representational content of an idea. So, formal inherence can be characterized as follows: an entity, say a property, exists formally in an object in case it exists in that object precisely as it is represented by our ideas. For instance, an object is formally triangular in case it actually has the property which is represented by our idea of trianglehood.

I read Descartes as holding that when a cause possesses a property in 'some higher form', the property inheres in the cause eminently.[29] Therefore, in order to understand the *Causal Reality Principle*, we should understand what Descartes means by eminent inherence. Unfortunately, Descartes is very unclear as to what eminent inherence ultimately allows and blocks out.[30]

---

[25] Third Meditation; CSM II, p. 31; AT VII, p. 45, emphases mine.
[26] CSM II, p. 114; AT VII, p. 161.
[27] Cf. Third Meditation; CSM II, p. 28; AT VII, p. 41.
[28] E.g. Second Set of Replies, CSM II, p. 113; AT VII, p. 161.
[29] See Second Set of Replies, CSM II, p. 97; AT VII, p. 135.
[30] Cf. Radner, "Rejoinder to Professors Richardson and Loeb", pp. 232–234.

Let me now introduce one way of analyzing the notion of eminent inherence, due to Eileen O'Neill.[31] I shall call it the *Eminence Thesis 1*:

> *Eminence Thesis (ET-1)*
>
> A property ∅ is eminently contained in X if and only if: ∅ is not formally contained in X; X is an entity displaying a greater degree of relative independence than any possible Y which could contain ∅ formally (i.e., higher up the ontological hierarchy than any such Y); and X has the power to bring about the existence of ∅.

We immediately notice that if *ET-1* is used in explaining the nature of causality, it seems of not much use, since it involves invoking the notion of having the power to bring about property whose production is the issue in question. In particular, if we try to explain, for instance, how X can produce motion in Y, it is hopelessly uninformative to invoke, in the *explanans*, the idea that X has the power of making Y move. In other words, when *ET-1* is used to explain how X can produce motion in Y, the explanation involves what can be called an 'explanatory solecism'—a trivially true statement of the form "X can produce motion in Y because X can produce motion in Y".[32] Supposing as I do that Descartes explains causality by invoking the notion of eminent containment, it is clear that the explication of eminent containment should not include reference to the power of bringing something about. Hence, the third clause of *ET-1* can be dropped.

Nevertheless, let us accept the principle for the time being as our first version of the analysis of eminent inherence and see whether it enables to allow causal relations from minds to bodies. Before entering into this discussion, let me enunciate what I shall call the *Causal Reality Principle 1*:

> *Causal Reality Principle 1 (CRP-1)*
>
> In order for x to impart F to y, x must either
> (1) actually contain F at least to the same degree as y contains F
> or
> (2) contain F eminently, eminent containment understood in accordance with the *Eminence Thesis 1 (ET-1)*.

---

[31] O'Neill, "Mind-Body Interaction and Metaphysical Consistency: A Defense of Descartes", p. 235.

[32] See Miller, "Objectivity Disfigured: Mark Johnston's Missing-Explanation Argument", p. 858.

Mind-body causality and the Causal Reality Principle: the second version

Let me proceed to discuss whether *CRP-1* allows mind-body causality by first considering body-body causality and then Descartes' view that God is the primary cause of motion.

It is easy to see that *CRP-1* allows causal relations between bodies. Remembering that material changes are ultimately changes in the way the constant total quantity of motion is parceled out between parts of matter, we only need to see how *CRP-1* allows these changes in order to see whether the principle allows causal relations between bodies. And, Descartes' example of a body losing a quantity of motion to another body and thus making it move fits perfectly with *CRP-1*. The cause-body is capable of imparting motion to the effect-body by actually containing the mode of motion at least to the same degree than the effect-body does. Notice, however, that according to *CRP-1*, a body can impart motion to another body only if it *actually* has as much motion as the other body. This is because the condition (2) does not allow bodies to contain motion eminently; a body is not higher up in the ontological scale than the body on which it imparts motion to. Therefore, in *CRP-1*, the condition (1) seems designed to cover causal relations within a single level of ontological hierarchy—such as causal relations between bodies; and the condition (2) is designed to cover something else, most likely cases of causal relations between entities residing in different ontological classes—such as causal relations between minds and bodies.

CRP-1 is also consistent with the thesis that God is the primary cause of motion. Namely, God eminently contains the mode of motion. This mode does not actually inhere in God, but God is higher up in the ontological hierarchy than any possible substance actually having the mode of motion. Hence, God is able to impart motion to the material world.

Consider now the case of mind-body causality. Does *CRP-1* allow causal relations from minds to bodies? First of all, it is obvious that in Descartes' ontology, motion cannot actually inhere in any mind. So, the question becomes whether motion can be contained in a mind in accordance with the condition (2) of *CRP-1*—i.e. whether motion can be contained in a mind eminently, as understood through *ET-1*. Now, both minds and bodies are substances, so a mind does not enjoy a higher place in the ontological hierarchy than any possible substance (i.e. some body) that could actually contain the mode of motion. But

ET-1 would require that minds are higher up in the ontological hierarchy than bodies. In the Sixth Meditation, Descartes indeed entertains the possibility of a creature "more noble than a body", in which case the creature would contain eminently those properties that it causes in another creature.[33] However, this possibility would fly on the face of Descartes' view that all created substances share the same level of relative independence; both minds and bodies are independent of all other substances besides God.[34]

So, *ET-1* should be reformulated to allow mind-body causation. Such reformulation has been suggested by Schmaltz.[35] It is based on O'Neill's analysis, but includes a reformulation of the second clause:

> *Eminence Thesis 2 (ET-2)*
>
> A property ∅ is eminently contained in X if and only if: ∅ is not formally contained in X; X is an entity displaying a greater degree of relative independence than ∅ (i.e., higher up the ontological hierarchy than ∅); (and X has the power to bring about the existence of ∅).

The third clause of *ET-2* is in brackets, since it is problematic precisely in the same way as in *ET-1* and can thus be dropped out: causality is explicated by invoking the notion of eminent containment, and hence

---

[33] CSM II, p. 55; AT VII, p. 79.

[34] See, however, Tad Schmaltz, "Deflating Descartes's Causal Axiom". His final analysis of eminent inherence is based on the idea that minds rank higher in the ontological hierarchy than bodies. Schmaltz holds that support for his analysis can be gained from Descartes' view that God is more perfect than body because he lacks divisibility that pertains to bodies (*Principles of Philosophy* I.23; CSM I, pp. 200–201; AT VIIIA, pp. 13–14). Also finite minds are indivisible (Sixth Meditation; CSM II, p. 59; AT VII, pp. 85–86), and Schmaltz suggests that minds are, then, more perfect than bodies as well. According to Schmaltz, both minds and bodies are substances, but minds are higher up in the ontological scale than bodies. I do not see how bodies could enjoy a lower place in the hierarchy unless they were mere modes. And indeed, Descartes is sometimes interpreted as a monist concerning the material world. According to this interpretation, individual bodies are merely modes of one material substance. This interpretation has been famously defended by Martial Gueroult (*Descartes' Philosophy* I, pp. 63–74; *Spinoza I*, pp. 540–555) and recently pursued by Thomas Lennon ("The Eleatic Descartes"). I believe Descartes may have thought that minds are in some sense more noble than bodies, but I do not think that Descartes would have held minds to be higher up in the ontological hierarchy in the sense of being mere modes. I would rather hold, as Schmaltz (p. 5) and, for instance, Paul Hoffman ("The Unity of Descartes's Man", pp. 347–349) do, that Descartes held all material substances, including the material world as a whole, to be divisible into further material substances, all enjoying the same level of relative independence as finite minds do (see also *Principles of Philosophy* I.60; CSM I, p. 213; AT VIIIA, pp. 28–29).

[35] Schmaltz, "Deflating Descartes's Causal Axiom", p. 9.

while explicating eminent containment one should not invoke the notion of having the power to bring something about.

Nevertheless, *ET-2* has merits over *ET-1*. For *ET-2* allows motion to inhere eminently in a mind. A mind is a substance, so it displays a greater degree of relative independence than motion which is only a mode. Since *ET-2* allows this, it also allows mind-body causation. We thus get a reformulation of the causal reality principle:

> *Causal Reality Principle 2 (CRP-2)*
>
> In order for x to impart F to y, x must either
> a) actually contain F at least to the same degree as y contains F
> or
> b) contain F eminently, eminent containment understood in accordance with the *Eminence Thesis 2 (ET-2)*.

Motion cannot actually inhere in any mind, but since a mind can contain motion in accordance with *ET-2*, the mind is able to impart motion to a body. Moreover, *CRP-2* allows body-body causation and is also consistent with the view that God is the primary cause of motion.

A problem with the second version of the Causal Reality Principle

If *ET-2* is accepted as the principle governing causal relations, Descartes' epistemology contains a serious problem in addition to the notorious problem of the Cartesian circle. Let me explain.

In the Third Meditation, Descartes argues that he can "lay it down as a general rule that whatever I perceive very clearly and distinctly is true".[36] Central to Descartes' argument is the thesis that there is a benevolent God who does not let Descartes go astray in things he perceives with utmost clarity and distinctness. However, it is crucial for Descartes to provide a sound argument for this thesis in order to make his epistemological system stand on a solid ground. As Descartes famously writes:

> And whenever my preconceived belief in the supreme power of God comes to mind, I cannot but admit that it would be easy for him, if he so desired, to bring it about that I go wrong even in those matters which I think I see utterly clearly with my mind's eye. [...I]n order to remove

[36] CSM II, p. 24; AT VII, p. 35.

> even this slight reason for doubt, as soon as the opportunity arises I must examine whether there is a God, and, if there is, whether he can be a deceiver. For if I do not know this, it seems that I can never be quite certain about anything else.[37]

Descartes then sets out to prove the existence of a benevolent God by arguing that his idea of God cannot have been produced by any other being than God. In particular, it is important for Descartes that the properties objectively contained in his idea of God cannot have been produced by Descartes himself; instead, they have been produced by God:

> So there remains only the idea of God; and I must consider whether there is anything in the idea which could not have originated in myself. By the word 'God' I understand a substance that is infinite, {eternal, immutable,} independent, supremely intelligent, supremely powerful, and which created both myself and everything else (if anything else there be) that exists. All these attributes are such that, the more carefully I concentrate on them, the less possible it seems that they could have originated from me alone. So from what has been said it must be concluded that God necessarily exists.[38]

According to Descartes, substances cannot be directly known; the only way to have knowledge of a substance is by having knowledge of its properties.[39] Therefore, the question is, why cannot Descartes himself cause the representation of properties he attributes to God? It is obvious enough that Descartes is not, say, actually omnipotent, but what prevents him from having omnipotence eminently? If, as *ET-2* allows, motion can inhere eminently in a finite mind, why cannot some divine property inhere in a finite mind as well?[40]

It is obvious that Descartes' causal principle should block the possibility that Descartes himself could eminently possess those properties that are represented by his idea of God. But consider now the *Causal Reality Principle 2 (CRP-2)*. Descartes is a substance, and therefore he has a greater degree of relative independence than any property. Hence, according to *ET-2*, nothing seems to prevent eminent containment, in Descartes himself, of the properties he attributes to God. And if nothing

---

[37] Third Meditation; CSM II, p. 25; AT VII, p. 36.
[38] Third Meditation; CSM II, p. 31; AT VII, p. 45.
[39] Second Set of Replies; CSM II, p. 114; AT VII, p. 161.
[40] See also Third Meditation according to which it is possible to think of motion to be contained in a finite mind eminently (CSM II, p. 31; AT VII, p. 45).

prevents it, then Descartes surely is able to cause his idea of these properties. No real God is needed. Therefore, Descartes' epistemology would become deeply problematic, and it seems he would not be able to dodge the skeptical worries he raises as an instrument of gaining certainty. We need a new formulation of Descartes' causal principle.

The Causal Reality Principle: the third version

Let me first suggest a reformulation of the causal principle and then move on to discussing it in somewhat greater detail. First, it is crucial to give a new formulation of the eminence thesis:

> *Eminence Thesis 3 (ET-3)*
>
> Y's property ∅ is eminently contained in X if and only if: ∅ is not formally contained in X; X is an entity displaying a greater degree of relative independence than ∅ (i.e., higher up the ontological hierarchy than ∅); and X contains formally, and at least to the same degree as Y, the same kind of active power that is the metaphysical basis of ∅.

We also get a new formulation of the causal reality principle:

> *Causal Reality Principle 3 (CRP-3)*
>
> In order for x to impart F to y, x must either
> a) actually contain F at least to the same degree than y contains F
> or
> b) contain F eminently, eminent containment understood in accordance with the *Eminence Thesis 3 (ET-3)*.

We already noticed that if *ET-1* or *ET-2* are to be used to explain, say, how X can impart motion on Y, both principles contain a clause that is an explanatory solecism, useless in the explanation of imparting motion. Now, *ET-3* involves a reformulation of this clause. Furthermore, the claim "X can impart motion on Y because X actually contains at least as much of the same kind of active power that is the metaphysical basis of motion" is not an explanatory solecism. In fact this claim becomes very important since it enables mind-body causality without falling prey to the epistemological problem that both *CRP-1* and *CRP-2* incur.

How does *CRP-3* avoid the epistemological problem, then? The crucial question is whether it allows Descartes himself to be the cause of his idea of divine attributes. Even more exactly, does *ET-3* allow eminent containment, in Descartes himself, of the properties he attributes to

God? The answer is 'No'. Descartes would be able to contain eminently, say, the property of omnipotence only if he would be able to contain at least to the same degree the same kind of active power that is the metaphysical basis of omnipotence. Descartes undoubtedly has a fair share of active power, but he would never consider the quantity of his active power to be extensive enough for omnipotence.

But how does *CRP-3* allow mind-body causation? This is a very important question, and ultimately the answer has to do with the view that mental and material entities can share the same kind of active power. In order to zero in on this view, I will next return to discuss Descartes' metaphysics of motion.

Motion and active power

As already noted, Descartes thought that changes in the material world reduce to changes in motion. However, there is a more fundamental metaphysical level to be reached concerning changes in the material world. Namely, on the deepest metaphysical level, the basis of motion is active power. And ultimately, this power is God's power, matter being ultimately inert. This line of interpretation has been plausibly defended by Gary Hatfield,[41] and in what follows I shall give a sketch of this reading of Descartes.

Here is how Descartes characterizes motion in the *Principles of Philosophy*:

> [*M*]*otion is the transfer of one piece of matter, or one body, from the vicinity of the other bodies which are in immediate contact with it, and which are regarded as being at rest, to the vicinity of other bodies.* By 'one body' or 'one piece of matter' I mean whatever is transferred at a given time, even though this may in fact consist of many parts which have different motions relative to each other. And I say 'the transfer' as opposed to the force or action which brings about the transfer, to show that motion is always in the moving body as opposed to the body which brings about the movement. The two are not normally distinguished with sufficient care[.][42]

In this passage, Descartes contrasts causal power with motion, and says that these two are not normally distinguished with sufficient care. For

[41] Hatfield, "Force (God) in Descartes' Physics".
[42] *Principles of Philosophy* II.25; CSM II, p. 233; AT VIIIA, pp. 53–54.

Descartes, motion is only a mode of a body, having no existence apart from some body. But what about the causal power Descartes refers to? What is it?

The lengthy quote in the beginning of this paper now becomes central. Recall Descartes' claim: "In the beginning {in his omnipotence} he [i.e. God] created matter, along with its motion and rest." Very well, God can create matter, but how can he impart motion to it? In the block quote above, Descartes distinguishes motion and the action which brings it about, so, he obviously believes that God can impart motion to matter since he has the required active power to produce motion. God is, then, the primary cause of motion.

What about the secondary causes? What are these? It may be tempting to suggest that these might be finite bodies which, after God's initial 'kick', act as causes for further effects. However, this suggestion is very problematic, since in Descartes' geometrical physics there seems to be no room for active powers. And indeed, Descartes does not hold that the secondary causes are finite beings. He writes:

> From God's immutability we can also know certain rules or laws of nature, which are the secondary and particular causes of the various motions we see in particular bodies.[43]

It is perhaps rather striking that Descartes understands the particular *causes* of motions as *rules* or *laws*. But this thought is perfectly compatible with the idea that matter *per se* cannot contain any active powers. Namely, as Descartes says, these rules are nothing but manifestations of God's immutability. The conservation laws are due to God's immutable concurrence—his continuous operation upon the material world. Descartes is quite clear on this when he, for instance, comments on one of the laws as follows:

> The reason for this second rule is the same as the reason for the first rule, namely the immutability and simplicity of the operation by which God preserves motion in matter. For he always preserves the motion in the precise form in which it is occurring at the very moment when he preserves it, without taking any account of the motion which was occurring a little while earlier.[44]

---

[43] *Principles of Philosophy* II.37; CSM I, p. 240; AT VIIIA, p. 62.
[44] *Principles of Philosophy* II.39; CSM I, p. 242; AT VIIIA, pp. 63–64.

And again, commenting on the rule that bodies tend to continue moving rectilinearly, Descartes writes in *The World*:

> This rule is based on the same foundation as the other two: it depends solely on God's preserving each thing by a continuous action, and consequently on his preserving it not as it may have been some time earlier but precisely as it is at the very instant that he preserves it.[45]

As Hatfield correctly puts it,[46] the basis of the secondary causes of motion is not the immutability of nature, but the immutability of God.

In order to get a clearer view of how God continuously acts upon the material world, let us dig a bit deeper into Descartes' metaphysics of motion. I shall here present an outline of a reading that has been given a detailed discussion by Juhani Pietarinen in chapter 6 of this volume. The first thing to note here is that Descartes distinguishes between motions and tendencies. As Pietarinen correctly points out, in Descartes' philosophy tendencies in a moving body are instantaneous determinations to move, whereas no motion can occur in an instant.[47] And the tendency is nothing but the active power applied to the body.[48]

Since Descartes believes that conservation and creation are only conceptually distinct, so that "the same power and action is needed to preserve anything at each individual moment of its duration as would be required to create that thing anew if it were not yet in existence",[49] God continuously exercises his creative activity in the material world; hence the conservation laws. And for Descartes, creation equals willing: "In God, willing, understanding and creating are all the same thing without one being prior to the other even conceptually."[50] So, the metaphysical basis of motion is God's active creative power which is the same thing as his will (see chapter 6 by Pietarinen).

We are now in a position to conclude that the active power required to set a body into motion stems from God. Furthermore, for a body to continue moving, it needs to be accompanied by a causal power. This power is an instantaneous determination due to God, not a property residing in the moving body *per se*. The metaphysical basis of motion and its lawlike characteristics is thus God's active power. Ultimately,

---

[45] *The World*; CSM I, p. 96; AT XI, p. 44.
[46] Hatfield, "Force (God) in Descartes' Physics", p. 122.
[47] See also *Principles of Philosophy* II.39; CSM I, p. 242; AT VIIIA, p. 64.
[48] See also *Principles of Philosophy* II.43; CSM I, p. 243; AT VIIIA, p. 66.
[49] Third Meditation; CSM II, p. 33; AT VII, p. 49.
[50] Letter to Mersenne, 27 May 1630; CSMK, pp. 25–26; AT I, p. 153.

what God conserves with respect to the material world is, then, the total quantity of causal power in each instant of time. And in doing this he exercises his will.

On the basis of the analysis above, it is easy to see that *CRP-3* allows God to impart motion to the material world. Namely, God contains motion eminently, eminence being understood in accordance with the thesis *ET-3*. First, God is not actually in motion; second, God is an entity displaying a greater degree of relative independence than the mode of motion; and third, God actually contains at least as much the same kind of active power that is the metaphysical basis of motion.

Mind-body causality and body-mind causality

In Descartes' philosophy, God is an infinite mental being. Therefore, since *CRP-3* allows God to impart motion to the material world, we already have a model on which mind-body causality is allowed. However, how does this model apply to us finite minds? How can we impart motion to the material world? The answer lies in the view that the causal power we have is in fact God's causal power; our will is, in its essence, similar to God's will. And in fact, as Pietarinen sets forth, Descartes' texts provide support for this view.

First of all, Descartes holds that the human will is crucial to causal relations from finite minds to bodies. The mind is capable of having effects in the material world through the faculty of will.[51] This sounds in fact very plausible. When I pocket the 8-ball in a game of billiards, I exercise my will; my will has effects on my hand that moves the club towards the cue ball, and so on.

Importantly, Descartes believes that our will is what makes us in an important sense like God:

> It is only the will, or freedom of choice, which I experience within me to be so great that the idea of any greater faculty is beyond my grasp; so much so that it is above all in virtue of the will that I understand myself to bear in some way the image and likeness of God. For although God's will is incomparably greater than mine, both in virtue of the knowledge and power that accompany it and make it more firm and efficacious, and also in virtue of its object, in that it ranges over a greater number of items,

[51] E.g. letter to Arnauld, 29 July 1648; CSMK, p. 357; AT V, p. 222.

> nevertheless it does not seem any greater than mine when considered as will in the essential and strict sense.[52]

God's will is in several respects different from our will. It has more power than ours, it is accompanied by greater knowledge than ours, and so on. But, in the strict sense, our will is similar to God's will. Moreover, Descartes holds that all effects that depend on the human will also depend on God's causal power:

> I must say at once that all the reasons that prove that God exists and is the first and immutable cause of all effects that do not depend on human free will prove similarly, I think, that he is also the cause of all the effects that do so depend. For the only way to prove that he exists is to consider him as a supremely perfect being; and he would not be supremely perfect if anything could happen in the world without coming entirely from him. […] God is the universal cause of everything in such a way as to be also the total cause of everything; and so nothing can happen without his will.[53]

Hence, when finite minds exercise their will and have effects in the material world, everything needed for this to take place comes entirely from God. The will we use is, ultimately, God's will, even if our will is in several ways a lesser faculty than God's will. Following Pietarinen's reading, I understand Descartes to hold that God has given us a share of the total quantity of causal power in the universe by giving us the faculty of will.

Provided that finite minds have a share of the total quantity of causal power in the universe, it is obvious that they can impart motion to material bodies. Even if I do not actually have the property of motion, I am able to impart motion, for instance, to the cue ball in the game of billiards. Namely, I rank higher up in the ontological scale than the mode of motion, and I have, at least as much as the billiard ball has, the same kind of causal power that is the metaphysical basis of the movement of the ball. The model is precisely similar to that of causal relations from God to the material world.

But how does this accord with the thesis that God conserves the same quantity of movement in the material world? Do I not add a tiny bit to the overall quantity of motion by hitting the cue ball? The answer is 'No', provided that we first see that the metaphysical basis of motion is

---

[52] Fourth Meditation; CSM II, p. 40; AT VII, p. 57.
[53] Letter to Princess Elizabeth, 6 October 1645; CSMK, p. 272; AT IV, p. 314.

causal power, and then that the thesis according to which God preserves the same quantity of motion can in principle be formulated as a thesis according to which God preserves the constant quantity of causal power in the universe (cf. Pietarinen's view). Thus, when a finite mind imparts motion to the material world, the total quantity of causal power in the universe remains constant.

Does the suggested model allow causal relations from finite bodies to finite minds? Yes, the model in principle allows this. A material body is capable of producing an idea; for instance the 8-ball is capable of producing my idea of it. The 8-ball of course does not formally contain any ideas. Nevertheless, being a substance, it ranks higher up in the ontological scale than my idea which is only a mode. Thus, the first two conditions of *ET-3* are fulfilled.

Now, since God and his causal power is the ultimate source of everything in the universe, it may be suggested that the metaphysical basis of an idea can also be considered to be causal power. And since the metaphysical basis of moving material substances is causal power (which is of course ultimately reducible to God's causal power), nothing in principle prevents this causal power from being transferred to a mind. In the suggested model, a material entity may, as a metaphysical basis of its motion, have a share of God's causal power, and it may have this power to at least to the same degree than is the metaphysical basis of an idea in a given mind. Hence, also the third condition of *ET-3* is fulfilled. And therefore, *CRP-3* is satisfied as well, since even if a material body does not formally have any ideas, the material body may have ideas eminently. This view of course sounds very obscure, but once it is interpreted as a thesis according to which a material body may have at least as much similar causal power as is the metaphysical basis of an idea, it does not seem so problematic anymore.

De novo creat

A central role in the model suggested in this paper is played by Descartes' conception of the conservation laws. As read in this paper, Descartes holds that God conserves the same quantity of causal power in the universe. Furthermore, since both minds and bodies may have causal power, we have the required similarity between the mental and the material in order for causality to take place.

However, Descartes' views on the way in which God conserves the same quantity of causal power in the universe present us with problems. Here is what Descartes writes in the Third Meditation:

> For a lifespan can be divided into countless parts, each completely independent of the others, so that it does not follow from the fact that I existed a little while ago that I must exist now, unless there is some cause which as it were creates me afresh at this moment—that is, which preserves me. For it is quite clear to anyone who attentively considers the nature of time that the same power and action are needed to preserve anything at each individual moment of its duration as would be required to create that thing anew if it were not yet in existence. Hence the distinction between preservation and creation is only a conceptual one, and this is one of the things that are evident by the natural light.[54]

Here Descartes explicitly says that preservation equals creating anew. God thus conserves the total quantity of causal power in the universe by constantly creating the universe again and again. Hence, when I decide to try and pocket the 8-ball by exercising my will to move the club, the moments in the series of moments that results in the 8-ball being in the pocket are completely independent of each other; no moment determines how the next moment turns out. To use a metaphor in order to make things more vivid, the picture suggested by the above passage is as follows. The series of moments that ends up with the pocketed 8-ball is like a series of still pictures in a reel. Not a single one of the still pictures contained in the reel determine how the next picture turns out, and without someone or something rolling the reel, no picture gives way to another picture. In Descartes' philosophy, then, it appears that God is needed *both* to secure that reel contains a coherent set of pictures, *and* to roll the reel.

But how can minds or bodies have any genuine causal power if all causal power is God's causal power and God is constantly needed for any change to occur? This, I find, is a very serious problem in Descartes' philosophy. At one extreme, some scholars have interpreted Descartes as an occasionalist, and at another extreme some have persistently maintained that despite passages such as the one above Descartes attributes genuine causal power both to finite bodies and to finite minds. I believe the latter reading is correct; I believe Descartes really was

[54] CSM II, p. 33; AT VII, p. 48.

an interactionist, even though it is no wonder that Cartesians such as Malebranche and Geulincx—most likely heavily motivated by Descartes' writings on the derivation of the conservation laws from divine sustenance—drew the conclusion that God is the only active causal agent in the universe. Descartes' writings surely give fuel to occasionalist ideas, there is no denying of that. But on my view, Descartes was a committed interactionist, and his interactionism may not even be such a failure as some scholars claim.[55] Namely, it is important to notice that another motive often cited as lying behind occasionalism—i.e. the problem that mind and body cannot interact while having absolutely nothing in common—loses its force in the model suggested in this paper. Namely, causal power due to God can in principle reside both in minds and in bodies and is enough to provide the common ground that makes mind-body interaction possible.

All this does not give an answer to the question whether Descartes really was, or is ultimately, committed to occasionalism, and I believe any suggestion is, on the one hand, underdetermined by textual evidence, and, on the other hand, at least *prima facie* inconsistent with something Descartes says. The model sketched in this paper remains suggestive, and I am sure it confronts problems. Nevertheless, I believe the model at least makes room for a view according to which Descartes' views may not altogether block causal relations between finite minds and finite bodies. And the key concept in the model is that of God's active causal power—power that is the deepest metaphysical basis of everything there is.[56]

[55] E.g. Watson, *The Downfall of Cartesianism*, pp. 36–37.

[56] My work on this chapter has been financially supported by the Academy of Finland (grant 8114178).

CHAPTER EIGHT

MOTION AND REASON: HOBBES' DIFFICULTIES WITH THE IDEA OF ACTIVE POWER

Juhani Pietarinen

> Galileus in our time, striving with that difficulty, was the first that opened to us the gate of natural philosophy universal, which is the knowledge of the nature of motion.
>
> Thomas Hobbes, *De Corpore*

Introduction

At first sight, a chapter on Thomas Hobbes (1588–1679) may seem entirely inappropriate in a book that examines metaphysical theories of the world as active power. Hobbes himself would certainly protest, for his main philosophical doctrine is that ultimately the world does not consist of power at all, but of motion. Hobbes wanted to build a 'first philosophy' entirely free from the assumption of powers or forces reminding of the 'occult qualities' of scholastic metaphysics. For a scientifically oriented philosopher there is just the world of bodies the ultimate constituents of which are motions: "For the variety of all figures arises out of the variety of those motions by which they are made; and motion cannot be understood to have any other cause besides motion."[1] So, if one wants to use notions referring to power, like 'cause', 'tendency' and 'resistance', these should be defined in terms of motion. We may speak of Hobbes' kinematist theory of power.[2]

In what sense can this kind of power be regarded as active? It follows directly from the kinematist theory that bodies can be active only in the relative sense of transferring a motion received from some other body to other bodies. Thus, active power in the corporeal world means, for

[1] *De Corpore* 1.6.6; EW I, p. 70.
[2] Valtteri Viljanen suggested this term to me.

Hobbes, bodily motion that will or may cause another motion. The idea of bodies having power of being and acting by themselves is rejected as scholastic nonsense:

> [F]or those that say anything may be moved or produced by itself, by species, by its own power, by substantial forms, by incorporeal substances, by instinct, by antiperistasis, by antipathy, sympathy, occult quality, and other empty words of schoolmen, their saying so is to no purpose.[3]

In brief, the notion of active power in the 'scientific' metaphysics Hobbes aimed at building is reduced to the motion of bodies conceived as causes of other motions.

This, however, is not all what can actually be found in his writings concerning the first philosophy. I will argue that Hobbes did not succeed in the attempt to eliminate from his kinematist metaphysics the idea of active power in the strong sense, understood as a capacity of being and acting 'in itself'. Certain basic assumptions of his philosophy seem to imply that God is such a power, and that God's power should be thought to be effective in the whole corporeal world. The failure to take these implications into account makes the Hobbesian first philosophy inconsistent and the proofs of certain of its basic principles problematic, most importantly the proof of the persistence principle crucial for Hobbes' construction of scientific metaphysics.

Hobbes' kinematist theory can be seen to fail also in giving an account of the activity of human reason. It seems evident that what Hobbes describes as 'ratiocination' involves active operations of reason in the strong sense of being causally independent of sensations and other bodily affections. The tacit presumption that humans are able to act freely, by their own power alone, becomes particularly obvious in Hobbes' description of the sovereign as an independent and unlimited agent in political life.

If we hold on to the kinematist theory officially promoted by Hobbes, there is not very much to be harvested for the present purposes. If, however, we follow the implications of Hobbes' more or less tacit presumptions concerning genuinely active power and bring them into daylight, a different picture emerges. If, as one of the implications, the laws of motion are taken to manifest God's active power, Hobbes' position turns out to be very similar to the Cartesian view of the inert material

[3] *De Corpore* 4.30; EW I, p. 531.

world as ultimately controlled by God's power, a view Hobbes bitterly attacked. Of particular interest prove then to be Hobbes' developments of the idea of striving or *conatus*, for example the idea of *conatus* as the basis of the identity of bodies and, as its implication, the general *conatus* principle that every thing strives to persevere in existence as far as it can by its own power—a principle that forms the cornerstone of the Hobbesian explanation of the world. Interestingly, the same principle has a central place also in Spinoza's metaphysical system, as will be seen in the next chapter.

Hobbes' ambitious project of unifying ethics, politics, and physics rests undoubtedly on inferring from the idea of the *conatus* of bodies the central principles of self-preservation and political freedom of human beings. In his 'official' first philosophy, the notion of striving is defined in terms of motion, which means that the reductionist project is doomed to fail for reasons to be discussed below.[4] However, it seems evident that Hobbes was not consistent in carrying through this project, for he adds a crucial new element when he moves from the *conatus* of bodies to the striving of human beings for self-preservation: the human capacity to control and guide one's conduct by the active power of reason. As for rationalists, the striving for self-preservation is for Hobbes ultimately a matter of reason in the human world. What leads people to establish a well-organized society under the rule of a sovereign power are certain rules proposed by reason, certain 'laws of nature', as he would put it. The working of active power in the human world is culminated in the Hobbesian sovereign: the sovereign is an institution in which the active power of reason of all citizens becomes united.

Hobbes against Descartes

From his first writings, Hobbes defended the view that the empirical world consists only of motions, and that no active power separate from motion exists. In the *Short Tract* of the early 1630s he argues that a body moves another either by active power inherent in the body itself or by motion received from another body, but because nothing can

[4] According to Hobbes' reduction, "the principles of the politics consist in the knowledge of the motions of the mind, and the knowledge of these motions from the knowledge of sense and imagination" which, in turn, "are the subject of physical contemplation" (*De Corpore* 1.6.6–7; EW I, pp. 72–73).

move itself, all motion must be caused by some other motion.[5] The same important conclusion appears also in a manuscript catalogued among the Classified Papers of the Royal Society: "There is nothing, yt can give a beginning of motion to itself. All determinations must proceed from some other movements."[6] Hobbes very clearly denies the idea that bodies would have a capacity of initiating their motions, that is, active power in virtue of which they would be able to exist and act 'by themselves'. This is the official view he defended throughout his life.

The denial of power separate from motion led Hobbes into a serious controversy with Descartes.[7] "Here we disagree: for what he calls tendency or action, I call motion, what he distinguishes from motion, I want to call motion", Hobbes writes in an early treatise on optics.[8] In Descartes' view, tendency or inclination to move is power that will be realized as motion whenever nothing prevents, whereas Hobbes insists that every inclination must be "really and properly" a motion.[9] Their fundamental disagreement comes out particularly well in the explanation of pressure. In Hobbes' view, we cannot understand pressure unless we think of inclinations as actual motions, for pressure is generated when a body is forced out of its place by the movement of another.[10] For example, on Hobbes' account a resting billiard ball exercises pressure on the surface of the table by moving minutely downwards all the time when it is lying on the table, and in case the table collapses, the ball continues the motion already begun. Thus, according to Hobbes, the inclination or endeavour to move must be understood as the very beginning of the downward motion; it is, he claims, "truly and properly speaking motion, although slight, for it is the beginning of motion or

---

[5] The first premise is stated as Principle 9 of the first section of *Short Tract*, and the second one as Conclusion 10 of the third section. Doubts about attributing this tract to Hobbes have been raised, but the proof for the denial of active power separate for motion is in any case very Hobbesian in character; for arguments against Hobbes' authorship, see Timothy Raylor, "Hobbes, Payne, and *A Short Tract on First Principles*".

[6] Quoted from Douglas Jesseph's "Hobbes and the Method of Natural Science", p. 90.

[7] For a detailed description and useful analysis of the controversy, see Brian Stoffel's "Hobbes's *Conatus* and the Roots of Character".

[8] *Tractatus opticus*, chapter 1, article 10. Hobbes developed his criticism against Descartes late in the 1630s, and Descartes first replied to it in his letter to Mersenne in January 1641.

[9] *Tractatus opticus* 1.13.

[10] *Tractatus opticus* 1.10; see also *De Corpore*: "[O]f two moved bodies one presses the other, when with its endeavour [which is a movement] it makes either all or part of the other body to go out of its place" (3.15.2; EW I, p. 211).

its first part, but a part of motion is motion".[11] Descartes rejected this reasoning in a straightforward fashion:

> He makes a false assumption when he says that 'all action [= inclination] is local motion'. For when I press, for example, with a stick against the ground, the action of my hand is communicated to the whole of that stick, and is transmitted as far as the ground, even though we do not suppose in the slightest that the stick is moved—not even indiscernibly, as he goes on to assume.[12]

Descartes rebutted Hobbes' suggestion with considerable arrogance. "I beg you not to teach him any more of my principles than he already knows, for he is not worthy of them", he wrote to Mersenne concerning Hobbes. "As for those principles of his, they are no principles at all; nor does he need any foundations, when he can build whatever he likes, by the power of his imagination, in the very air", Hobbes responded immediately.[13] Ironically enough, exactly the elements Hobbes claims Descartes to hang in the air were those he himself was not, I will argue, entitled to eliminate from his principles of motion.

God as active power and the laws of motion

The most obvious candidate for a locus of active power in the strong sense can be found in Hobbes' arguments and comments on God's nature and role in the world. Hobbes first argues that the corporeal world cannot be eternal but must have been generated by God:

> For by the word God we understand the world's cause. But […] they who maintain the world not to be created, but eternal, because there can be no cause of an eternal thing; in denying the world to have a cause, they deny also that there is a God.[14]

What does Hobbes mean by God's being the cause of the world? In *Leviathan* we find the following passage:

---

[11] *Tractatus opticus* 1.13.

[12] Descartes to Mersenne, 18 February 1641; letter 32 in *The Correspondence of Thomas Hobbes* I, p. 91.

[13] Quotations are from Descartes' letter to Mersenne, February/March 1641 (letter 33, *ibid.*, p. 97) and Hobbes' letter to Mersenne, March 1641 (letter 34, *ibid.*, p. 108).

[14] *De Cive* 15.14; EW II, p. 213.

> For he that from any effect he seeth come to pass, should reason to the next and immediate cause thereof, and from thence to the cause of that cause, and plunge himself profoundly in the pursuit of causes; shall at last come to this, that there must be (as even the heathen philosophers confessed) one first mover; that is, a first, and an eternal cause of all things; which is that which men mean by the name of God.[15]

God should be conceived as the first and eternal cause of all motions. The notion of cause, however, is quite special here, entirely different from the one used in the context of bodily interactions. God is not moving, for, Hobbes argues, we cannot reasonably think of the infinite God as changing place; "for nothing can be said to be in a place, but what hath bounds and limits of its greatness on all sides".[16] And as the first mover God cannot be caused by any kind of motion. Consequently, Hobbes is bound to assume the existence of an infinite power capable of being and acting entirely 'in itself', in the traditional rationalist sense.

What follows from this assumption for the Hobbesian explanation of the world? Hobbes himself seems to think that God has just caused the first beginnings of motions of bodies and then left the world with the causal chains to evolve from them.[17] This, however, leaves unanswered important questions about the role of God's power in these chains. To obtain a better picture, let us consider the argument for his version of the persistence principle.[18]

The first part of the principle runs: "Whatsoever is at rest, will always be at rest, unless there be some other body besides it, which,

---

[15] *Leviathan*, part 1, chapter 12, paragraph 6/32; MP, p. 169.

[16] *De Cive* 15.14; EW II, p. 213. Does Hobbes think of God as being infinitely extended? No, he just wants to say that such notions as motion and place and shape apply only to finite things; from an infinite thing we cannot form any conception. "For when we say that a thing is infinite, we signify nothing really, but the impotency in our own mind" (*ibid.*). However, in spite of this kind of impotency, Hobbes takes it possible to claim that God neither moves nor is in rest.

[17] As an answer to Bishop Bramhall, Hobbes explains that concurring motions do not make one simple chain but "an innumerable number of chains joined together, not in all parts, but in the first link, God Almighty" (EW IV, p. 105).

[18] The principle is stated and proved in *De Corpore* 2.8.19; EW I, p. 119. Instead of speaking in the customary way of the law of inertia, I follow here the terminology used by Jesseph (suggested originally by Daniel Garber in connection with Descartes' version of the principle in question); see Jesseph, "Hobbesian Mechanics", p. 131, n. 16. The term 'inertia' was used at Hobbes' time in a sense entirely different from the one in Newton's famous law.

by endeavouring to get into its place by motion, suffers it no longer to remain at rest." The proof rests on the presumption that a body at rest cannot set itself to move, from which Hobbes concludes that some other body must bring it to this motion. But suppose a universe of just two contiguous resting bodies. Obviously, the first one cannot be set into motion by any further body but the initiation of the first mover is needed. What brings the second body out of the rest? Not the endeavour of the first body 'to get into its place by motion', as Hobbes claims, but the very same action of the first mover by which the motion of the first body is generated. And similarly in a chain of any length in a full universe. Further, if we suppose an empty space between two bodies, the question about power still arises, for a body cannot be pushed aside merely by a *motion* of another body, as Hobbes seemingly supposed. For according to Hobbes' official view, endeavouring is nothing but a momentary change of location and should be as such enough for causal explanation without any extra assumption of power or force—a view he vehemently defended against Descartes.

The other part of the principle states the persistence of motion: "In like manner, whatsoever is moved, will always be moved, except there be some other body besides it, which causeth it to rest." The proof rests on the presumption that no body is in itself capable to end its motion. From where do the bodies obtain the power to stop each others' motions? The fact that the endeavour of one body is contrary to the endeavour of another does not account for its capability of *resisting* the latter, as long as the endeavours are conceived as nothing but motions.[19] Moreover, why should we think that the endeavour, a momentary first motion, will continue at the subsequent moments of time? The important question of the preservation of motion once begun remains unanswered in Hobbes' treatment.

[19] Hobbes defines resistance as "the endeavour of one moved body either wholly or in part contrary to the endeavour of another moved body, which toucheth the same" (*De Corpore* 3.15.2; EW I, p. 211). Actually Hobbes proves that all endeavouring is propagated to infinite distance (in *De Corpore* 3.15.7; EW I, p. 211). According to the proof, the first endeavour of a body will proceed in an empty space in a constant way because it cannot receive any resistance; and in a space filled by other bodies, "that which stands next in its way shall be removed, and endeavour further, and again remove that which stands next, and so infinitely". So nothing can make bodies rest—if God almighty does not intervene with his active power to be the last stopper as well.

In the light of these considerations, Hobbes *should* have come to the view of the world as manifesting God's active power through the laws of motion. In point of fact, he sometimes speaks as if this were his view, for example in *Leviathan*'s remark that we can become more easily assured of the existence of the eternal, infinite, and omnipotent God "from the desire men have to know *the causes of natural bodies, and their several virtues, and operations*", than "from the fear of what was to befall them in time to come".[20] What is claimed here is that God's active power can be thought to be manifested in the world as the structures, qualities, and behaviour of bodies, that is, as things resulting from various kinds of motions obeying certain general laws. More often, and more openly, Hobbes speaks of certain 'laws of nature' as divine laws given by God for leading people to rational, peaceful life.[21] In his official first philosophy, however, considerations about God's nature and role are overlooked by contending that God is infinite, eternal, and incomprehensible, or that the examination of God's nature falls outside the scope of philosophy as a rational doctrine.[22] The aim to keep strictly on scientific grounds led Hobbes to expunge the idea of God's power from his explicit first philosophy, which, paradoxically, left him with nothing to account for true causal agency in the world.

Conatus *as active power*

There is, however, an interesting notion of active power in Hobbes' official theory of the world. It comes up in the form of *conatus*, or 'endeavour'. In *De Corpore*, the notion is defined as follows:

> I define *endeavour* to be motion made in less space and time than can be given; that is, less than can be determined or assigned by exposition or number; that is, motion made through the length of a point, and in an instant or point of time.[23]

[20] *Leviathan* 1.12.6/32; MP, p. 169, emphasis added.

[21] For example, in *De Cive* 4.1 (EW II, p. 50): "The same law which is natural and moral, is also wont to be called divine, nor undeservedly; as well because reason, which is the law of nature, is given by God to every man for the rule of his actions."

[22] See e.g. *De Cive* 15.14; EW II, p. 213, *Leviathan* 1.12.7/32; MP, p. 170, *De Corpore* 1.1.8; EW I, p. 10.

[23] *De Corpore* 3.15.2; EW I, p. 206.

For Hobbes, an endeavour is an indefinitely small change in the place of a body in an indefinitely small time, a motion in an instant of time.[24] The above definition of endeavour is quite general in the sense that it applies not only to the beginning of a local movement but to any indefinitely small motion of bodies. Thus all movements consist of endeavours which are seen as instantaneous motions in the Hobbesian metaphysics.

Now, it is in terms of such endeavours Hobbes wants to explain the active power of corporeal things. In *De Corpore*, active power is identified with the efficient cause:

> [T]he power of the agent and the efficient cause are the same thing. But they are considered with this difference, that cause is so called in respect of the effect already produced, and power in respect of the same effect to be produced hereafter; so that cause respects the past, power the future time. Also, the power of the agent is that which is commonly called active power.[25]

The agent is the body causing an effect in another body, the patient, and because causes and effects are nothing but motions for Hobbes, the power of the agent amounts to a certain kind of movement of the causing body.[26] Correspondingly, the power of the patient, or passive power, is defined as the material cause consisting of a movement of the body affected. But if motions are seen as consisting of point-like endeavours, the efficient cause must be the last point of the movement of the agent and the effect the first point of the movement of the patient, which means that both active and passive powers should be understood as endeavours. All power or force of bodies consists thus

---

[24] Motion is defined by Hobbes as "a continual relinquishing of one place, and acquiring of another" (*De Corpore* 2.8.10; EW I, p. 109). For him *conatus* is thus a quantity of extension. Leibniz became interested in Hobbes' idea of endeavour as motion through a point. According to Leibniz, however, a point should not be thought as a divisible entity, as Hobbes did, but as something entirely non-extended and thus indivisible (*Sämtliche Schriften und Briefe*, p. 265). This led him to the important invention of *conatus* as a power-like quantity having density but no extension, and to the idea of the world as consisting of ultimately of such 'mental points' he later called 'monads'. For a useful examination of Hobbes' idea of endeavour and Leibniz's implementation of it to his early physical works, see Howard Bernstein's "*Conatus*, Hobbes, and the Young Leibniz". For more on monads and power, see Repo and Viljanen's contribution in this volume.

[25] *De Corpore* 2.10.1; EW I, p. 127, emphasis removed.

[26] "[I]t may be understood, that all active power consists in motion" (*De Corpore* 2.10.6; EW I, p. 131).

of the endeavours they have, but only with respect to agents the power is said to be active.[27]

The above explanation makes the distinction between active and passive power entirely relative, as can be explicitly read from *De Corpore*: all parts in a causal chain are "both action and passion, and cause and effect, according as they are compared with the antecedent or subsequent part".[28] If a billiard ball is struck to make another ball to move, its power, considered as endeavour, is active with respect to the other ball but passive with respect to the stroke of the cue. As already noted, Hobbes emphatically denies that bodies have power to produce either their own motion or motion in other bodies by themselves, independent of anything else.

The project of reducing all power of bodies to motion leads, however, to insurmountable difficulties, as young Leibniz sharply discerned.[29] If power is taken as nothing but motion of bodies, such phenomena as resistance and pressure become incomprehensible. A resting body, when struck by a moving one, not only begins to move but also resists the change, but this is what Hobbes seems to have ignored when reducing resistance to motion. In this respect his project was a failure.[30] However, the very idea of endeavour as a power of bodies to persist in the motion once begun is extremely interesting and important in Hobbes' philosophy.

---

[27] Hobbes defines physical force as the velocity of endeavour, and resistance as "the endeavour of one moved body either wholly or in part contrary to the endeavour of another moved body". Of two moved bodies one is said to press the other when "with its endeavour it makes either all or part of the other body to go out of its place" (*De Corpore* 3.15.2; EW I, p. 211).

[28] *De Corpore* 2.9.6; EW I, p. 123. If we think that the chain has a beginning and an end, the former can only be an action and the latter a passion, as Hobbes remarks in the same passage.

[29] In his letter to Hobbes in July 1670 (letter 189 in *The Correspondence of Thomas Hobbes* II), Leibniz points out absurdities to which the assumption of causal power of bodies as nothing but motion will lead. If power is identified with motion, no reason for the cohesion of things can be given, he complains. Leibniz wanted to call Hobbes' attention to problems arising from understanding power in terms of bodily motion. "[S]o far as I know, the proposition 'every agent of motion is a body', which you frequently use, has never been demonstrated", he remarks.

[30] As Jesseph points out, "Hobbes's scheme does not even permit the introduction of the concept of force, if by the term *force* we understand something like the power to initiate motion" ("Hobbesian Mechanics", p. 150).

Endeavour and the identity of individuals

One important development is the attempt to define the concept of individual in terms of *conatus*.[31] Hobbes suggests that the identity of an individual thing consists of those motions the thing obtains in the beginning of its existence:

> [I]f the name be given for such form as is the beginning of motion, then, as long as that motion remains, it will be the same *individual* thing; as that man will be always the same, whose actions and thoughts proceed all from the same beginning of motion, namely, that which was in his generation; and that will be the same river which flows from one and the same fountain, whether the same water, or other water, or something else than water, flow from thence; and that the same city, whose acts proceed continually from the same institution, whether the men be the same or not.[32]

Thus individuality is determined by the initial motion of a thing, that is, by its *endeavour* which for Hobbes represents active power. In virtue of this striving corporeal things maintain their identity. We may speak of this striving as the *inherent power* of things, bearing in mind that for the 'official' Hobbes it means just an indefinitely small motion continuing unchanged in the absence of intervention.

An example from *De Corpore* illuminates the idea. A bent crossbow tends to restore itself, because "the endeavour or motion of [its] internal parts, by which they were able to recover their former places or situations, was not extinguished".[33] When bent, the bow strives to return to its original posture, and when the force keeping it bent is removed, the bow necessarily regains its original form. The bow endeavours to preserve its intrinsic nature by its inherent power; it has an 'appetite' for restitution, Hobbes says. In case the thing remains bent a long time, it will lose its nature and "get such a habit, that when it is loosed and left to its own freedom, it will not only not restore itself, but will require as much force for the bringing of it back to its first posture, as did for the bending of it at the first".[34] When the artefact acquires a new 'habit', a new essential nature, it ceases to be a crossbow.

---

[31] The idea of *conatus* as active power is central also in Spinoza's theory of individuality; see Viljanen's chapter on Spinoza.

[32] *De Corpore* 2.11.7; EW I, p. 135.

[33] *De Corpore* 3.22.18; EW I, p. 347.

[34] *De Corpore* 3.22.20; EW I, p. 348.

To be more precise, the essence of a complex individual body consists, for Hobbes, of the endeavours of its smallest parts, and the individual preserves its identity as long as these original endeavours are maintained. In other words, the preservation of any individual body depends on its inherent power understood as its original endeavours. By this power, Hobbes explains, bodies strive to keep their original nature and resist all opposing powers.[35] The underlying idea here can be put in terms of what can be called the general *conatus* principle: *every thing endeavours to preserve its own nature and existence as far as it can by its own power*. The principle is stated explicitly in Hobbes' political philosophy, but the basic idea can be traced to his general theory of motion.[36]

The phrase 'as far as it can' refers here to the fact that bodies strive to *oppose* by all of their power anything that exerts power against them. The bow, while being bent by the force of the archer, also resists this force. As noted above, this is strictly speaking a job Hobbesian endeavours cannot accomplish; they are motions, and in virtue of their motions alone bodies cannot have any resisting power. Neither do endeavours explain why bodies tend to return to their original 'habit' after temporary changes in their shape. Why should the original motions of the parts of the bow recover after the grip of the hand is loosened? How can the bow keep its original form to begin with? Hobbes' theory fails to account for the most important aspect of the identity of physical

---

[35] In *Decameron Physiologicum*, Hobbes explains the behaviour of the crossbow as follows: "[T]he smallest parts of a hard body have every one, by the generation of hardness, a circular, or other compounded motion; such motion is that of the smallest parts of the bow. Which circles in the bending you press into narrower figures, as a circle into an ellipsis, and an ellipsis into a narrower but longer ellipsis with violence; which turns their natural motion against the outward parts of the bow so bent, and is an endeavour to stretch the bow into its former posture. Therefore if the impediment be removed, the bow must needs recover its former figure" (EW VII, p. 135). Leibniz realized the importance of Hobbes' idea of bodies as structures of the endeavours of their simplest parts. Leibniz, however, reasoned that the simplest parts cannot be divisible and thus extended, and drew the ingenious conclusion that the *conatus* of bodies must mean non-extensional 'power points' occupying a certain region in the space. This idea led him to important developments in metaphysics, physics, and mathematics.

[36] The principle concerning people is stated in *De Cive* as follows: "[I]n the first place I set down for a principle […] that the dispositions of men are naturally such, that except they be restrained through fear of some coercive power, every man will distrust and dread each other; and as by natural right he may, so by necessity he will be forced to make use of the strength he hath, toward the preservation of himself" (Preface 3/10; EW II, p. xiv).

individuals: the cohesion keeping the parts of bodies together.[37] More than mere motion must be assumed to be involved in endeavours, as Hobbes implicitly seems to do.

But let this be as it may, and let us turn briefly to Hobbes' explanation of human emotions, or 'passions'. We find here certain interesting affinities to Spinoza's theory of emotions. According to Hobbes, emotions arise in the heart as changes taking place in its inherent vital motions. When a motion generated by some external cause proceeds to the heart and strengthens its vital motion, a passion of delight or pleasure is felt; and when it weakens or hinders this motion, pain arises. Thus, anything increasing the inherent active power of an individual causes delight and what decreases it is a cause of pain. These reactions generate in turn respective strivings towards objects of pleasure and away from objects of pain. The former striving is desire, or appetite, and the latter aversion.[38] Spinoza's explanation of passions and desires is essentially the same, apart from the fact that he declares the causal processes to be expressed in two parallel ways, as physiological movements and as mental experiences.

According to Hobbes' reductionist program, emotions, desires, and aversions are nothing but bodily movements caused by movements of external objects, and actions arising from them just links in a 'mechanical' process of movements causing other movements. The obvious problem in this explanation is the same as in all materialist theories: how should we understand emotions and desires as mental experiences, as special kind of inner qualities, which inanimate bodies lack? Hobbes wards off a serious consideration of this question by contending that our passions are really motions, but as sensations they are 'felt' or they 'appear' to us as various kinds of feelings and desires.[39] Another problem

---

[37] This is what young Leibniz remarked to Hobbes in his letter mentioned above (see note 29): "[W]hat perplexes me […] is, above all, the fact that no clear reason has been given for the consistency or cohesion of things."

[38] *Elements of Law* 1.7.1; FT, p. 28; *Leviathan* 1.6.2/59, 1.10.59; MP, pp. 119, 121.

[39] For example in *Leviathan*: "As, in sense, that which is really within us, is […] only motion, caused by the action of external objects, but in apparence; […] the real effect there is nothing but motion, or endeavour; which consisteth in appetite, or aversion, to or from the object moving. But the apparence, or sense of that motion, is that we either call delight, or trouble of mind" (*Leviathan* 1.6.9/59; MP, p. 121). Yves Charles Zarka rightly remarks that Hobbes "quietly turns a philosophy of body into a philosophy of mind, by which I mean a doctrine of mental life dominated by a theory of appearance or the phantasm that has the tendency to detach itself from its

concerns the initiative ability of human mind: if all mental processes are just sensory motions, how can we understand such capacities as logical reasoning or deliberate decision-making?

Reason, will, and active power

The causal model, developed for explaining interaction among inanimate bodies, may be suitable, at least in certain respects, for giving an account of human emotions and desires, but it seems quite inappropriate for handling mental activities Hobbes describes as 'ratiocination'. A very different kind of active power from the one assumed to be at work in mutual interactions of bodies seems to be involved in human reasoning.

Hobbes makes a sharp distinction between sense experience and scientific knowledge. Experience is explained in *De Corpore* as reactions of the brain and heart to movements proceeding from external bodies to these parts of the human body. Sensations, which are nothing but endeavours or small motions, are preserved in the brain and heart as 'memories' or 'images' after their external cause is removed.[40] In *The Elements of Law*, experience is defined as "remembrance of what antecedents have been followed with what consequents".[41] We learn by experience how events produce other events, which, Hobbes says, provides useful practical wisdom despite the fact that experiential conjectures often prove fallacious. We cannot conclude from experience what is just or unjust, or true or false, "nor any proposition universal whatsoever", he claims in *The Elements of Law*.[42] Thus, he admits, sense experience alone does not yield reliable moral or scientific knowledge; for this active operations of the mind are needed as well.

In *Leviathan*, Hobbes describes the way in which we can attain trustworthy knowledge:

> [F]irst in apt imposing of names; and secondly by getting a good and orderly method in proceeding from the elements, which are names, to assertions made by connexion of one of them to another; and so to syl-

---

supposed basis in a materialistic metaphysics" ("First philosophy and the Foundation of Knowledge", p. 77).

[40] *De Corpore* 4.25.2; EW I, p. 391.

[41] *Elements of Law* 1.4.6; FT, p. 14.

[42] *The Elements of Law* 1.4.11; FT, p. 16.

> logisms, which are the connexions of one assertion to another, till we come to a knowledge of all the consequences of names appertaining to the subject in hand.[43]

This is clearly a description of active mental operations. In contrast to pure sense experience, where the stream of observations determines the regulation of the 'images' of observed objects in mind, in reasoning, or ratiocination, the elements of thought, although based on observations, are combined in accordance with logical principles and rules to proceed from one thought to another. In true rationalist spirit, Hobbes sees geometry as a paradigmatic form of ratiocination. Geometry yields demonstrable knowledge, he says, for "the lines and figures from which we reason are drawn and described by ourselves".[44] In line with the long rationalist tradition, Hobbes equates the 'self' that does the job with the faculty of reason, by means of which alone true knowledge is possible. For example, only by ratiocination we can become convinced of whether a given figure before us is a circle: if it is produced by fixing the one end of a body of given length and following the line the other end draws, we can be certain of it being a circle; but never by sense perception.[45] Also certain laws of motion, common to all corporeal bodies, can be proved as valid by reason alone, according to Hobbes. A case in point is offered by his proof of the persistence principle, and another by the proof, relying on this principle, that all endeavours will continue to infinite distance, growing weaker and weaker until becoming imperceptible by sense. "Motion may be insensible; and I do not here examine things by sense and experience, but by reason", Hobbes remarks.[46]

If the operations of reason are thought as some kind of motions, as the Hobbesian project would imply, the question of the beginning of such operations arises. If nothing in the corporeal world is able to set itself to motion, then all the workings of reason should be assumed to be caused from outside and appear thus to be merely passive effects. As a link in a causal chain also reason, understood as certain kinds of physiological movements, could then be active only in the relative sense. But this would entirely ruin Hobbes' distinction between experience and reason, according to which it is 'we ourselves' that generate operations of reason, in distinction to causally regulated sense perception.

---

[43] *Leviathan* 1.5.17/22; MP, p. 115.
[44] *Six Lessons*, Dedication; EW VII, p. 183.
[45] *De Corpore* 1.1.5; EW I, p. 6.
[46] *De Corpore* 3.15.7; EW I, p. 216.

The attempt to account for everything in the world in terms of movements caused by other movements seems to fail in respect of reason. If endeavouring is understood as a causally determined movement, it fails to represent the active nature of reason.

The same problem burdens the notion of will. Hobbes speaks of voluntary actions based on deliberation, like raising one's hand at will, and this sounds as if he would accept the idea of free decisions of mind. Deliberation is defined as "putting an end to the liberty we had of doing, or omitting, according to our own appetite, or aversion".[47] According to the account of the will presented in *The Elements of Law* and *Leviathan*, however, all deliberation is determined by desires and other passions which in turn arise from external causes. The images external objects leave in us are either desires or aversions, depending on whether they cause bodily movements towards the objects or away from them. Now, deliberation is nothing but interplay of various movements towards or away from objects or states of affairs in the world, "the whole sum of desires, aversions, hopes and fears", Hobbes says.[48] How does such an interplay of competing causes lead to the choice of an action in some particular situation? Because the theory excludes all free power of the will to intervene the causal process, the only possibility is that the relative strength of the passions will determine the action, and this seems to be a purely mechanical process where the 'decision' of the will is simply the last effect in a chain of antecedent movements.[49] If the will is the last desire in deliberation, as Hobbes claims, what room is left for real liberty of doing or omitting, for choosing between desires and aversions? [50] In particular, how decisions and actions *against* bodily desires and aversions can be explained?

---

[47] *Leviathan* 1.6.50/59; MP, p. 127. In *The Elements of Law*, deliberation is said to last as long as "the action whereof we deliberate, is in our power; for so long we have liberty to do or not to do: and deliberation signifieth the taking away of our own liberty" (1.12.1; FT, p. 61).

[48] *Leviathan* 1.6.49/59; MP, p. 126.

[49] Hobbes acknowledges that also (sentient) animals are able to deliberate in this sense: "This alternate succession of appetites, aversions, hopes and fears, is no less in other living creatures than in man: and therefore beasts also deliberate" (*Leviathan* 1.6.51/59; MP, p. 127). What about inanimate beings? The boundary between animate and the inanimate seems to disappear in Hobbes' reductionist account, or at least it is hard to discern, as Tom Sorell remarks (*Hobbes*, p. 75). However, a certain kind of functional difference might be seen here: the inherent power to maintain one's essential nature, appearing as self-regulating motions like blood circulation and brain functions, can be assumed to be much higher in animals than in lifeless beings.

[50] "In deliberation, the last appetite, or aversion, immediately adhering to the

In any case, according to Hobbes' causal theory voluntary actions arise from desires and aversions, which both are motions. The last desire in deliberation, i.e. the will, causes the beginning of an action, and from this on the action will continue with the same endeavour until new desires appear and cause other actions. This application of the law of persistence turns out to be very important in Hobbes' political philosophy.

The striving for power

It follows from the causal account of the will that people necessarily, that is, by *causal necessity*, strive to attain the objects of their desire and to avoid anything causing aversion.

> For every man is desirous of what is good for him, and shuns what is evil, but chiefly the chiefest of natural evils, which is death; and this he doth by a certain impulsion of nature, no less than that whereby a stone moves downward.[51]

The reductionist view of human life is presented here extremely bluntly: we are like stones—once shoved to motion we necessarily continue to move if nothing prevents. "[L]ife itself is but motion", he says in *Leviathan*.[52] Life means motion as endeavour; it is striving for maintaining the vital motions one has acquired at birth, the inherent power in virtue of which individuals preserve their essential nature.[53]

According to Hobbes' causal model, people necessarily seek happiness, for "continual success in obtaining those things which a man from time to time desireth, that is to say, continual prospering, is that men call felicity".[54] Success in this striving depends of course on one's ability to overcome the forces resisting one's movements towards things

---

action, or to the omission thereof, is that we call the *will*; the act, (not the faculty,) of willing" (*Leviathan* 1.6.53/59; MP, p. 127; see also *Elements of Law* 1.12.2; FT, p. 61). Thus any act of will is determined by the winning desire in the interplay of desires and aversions in deliberation.

[51] *De Cive* 1.7; EW II, p. 8.

[52] *Leviathan* 1.6.58/59; MP, p. 129.

[53] Occasionally Hobbes speaks equivalently of 'nature' and 'life', for example in *Leviathan*'s definition of the right of nature as the liberty of man to use his power as he wills "for the preservation of his own nature; that is to say, of his own life" (1.14.1/33; MP, p. 189).

[54] *Leviathan* 1.6.58/59; MP, p. 129, emphasis removed.

desired, and to improve their position people need proper means in their pursuit of happiness. In this instrumental sense, "the power of a man […] is his present means, to obtain some future apparent good".[55] The natural striving for persevering in existence manifests itself as continual striving for implements like "riches, reputation, friends, and the secret working of God, which men call good luck", and to obtain advantage everyone needs more and more instrumental power over things bringing happiness.[56] The nature of power, Hobbes contends, is "like the fame, increasing as it proceeds; or like the motion of heavy bodies, which the further they go, make still the more haste".[57] In this way he arrived at his famous claim concerning the striving for power, common to all human beings:

> So that in the first place, I put for a general inclination of all mankind, a perpetual and restless desire of power after power, that ceaseth only in death.[58]

According to this claim, what we continually will is increasing power over other people and other things in the environment. Some two hundred years later the thesis was made famous by Nietzsche: the inherent striving in us, our essential *conatus*, is nothing but will to power.[59]

Will to power and the laws of nature

Hobbes proceeds to his crucial conclusion that the perpetual will to power will lead, under certain conditions, to a violent competition for acquiring more power, where the stronger subdue or destroy the

---

[55] *Leviathan* 1.10.1/54; MP, p. 150.

[56] *Leviathan* 1.10.3/54; MP, p. 150. If taken seriously and not merely as a pious phrase, the allusion to God's secret working confirms the view of Hobbes as taking God to exercise active power in human conduct.

[57] *Leviathan* 1.10.2/54; MP, p. 150.

[58] *Leviathan* 1.11.2/27; MP, p. 161.

[59] It may be worth noting how Nietzsche in certain posthumous notes generalizes the idea to the whole nature, including inanimate bodies, coming surprisingly close to Hobbes' program of explaining everything ultimately in terms of endeavours (excluding the difficulties related to the Hobbesian notion of power). "The victorious concept 'force', by means of which our physicists have created God and the world, still needs to be completed: an inner will must be ascribed to it, which I designate as 'will to power', i.e., as an insatiable desire to manifest power; or as the employment and exercise of power, as creative drive, etc. […] There is nothing for it: one is obliged to understand all motion, all 'appearances', all 'laws', only as symptoms of an inner event and to employ man as an analogy to this end" (*The Will to Power*, § 619).

weaker and everyone has to live under constant insecurity. Such a miserable state of affairs, 'the state of nature', will result when no higher power is present to prevent people from using violent means in the struggle for power. Then everyone is entitled to "preserve his own life and limbs, with all the power he hath", in accordance with the general *conatus* principle.[60] According to Hobbes' argument, the miserable life will be inevitable if people just follow their natural passions and desire for power; it will result by the same necessity as causal processes in general. However, the end state, although arising from the desires of individual persons, is something no one wants to live in.[61] Because of this constant fear and incommodities cause a strong endeavour to get rid of perpetual threat of violence and to seek after peace, but in the absence of a power capable of keeping mutual violence in check, the miserable condition prevails.[62] To extricate themselves from this situation people need a strong authority to protect them in their pursuit of happiness.

Precisely here, however, Hobbes' causal account of will fails to serve his intentions. What he actually argues is that the way to the establishment of an authority granting peaceful life is found by people's active power of reason: "[R]eason suggesth convenient articles of peace, upon which men may be drawn to agreement."[63] It should be noted that the power of reason is not needed to *suppress* or *govern* people's natural passions and desires. The 'articles of peace' are, for Hobbes, certain rules or precepts of reason, by relying on which people will gain better possibilities to satisfy their natural desires, achieving thereby a form of life with much more joy and happiness than the state of nature can provide, and also to ensure themselves not only a better but also a longer life. Thus life under the guidance of reason accords with the general *conatus* principle. According to Hobbes, the way to a happier way of living, to a 'civil society' or 'commonwealth', can be *demonstrated* by reason in the same sense as theorems in geometry: as geometry is demonstrable because we ourselves make the proof operations, so "civil philosophy

---

[60] *Elements of Law* 1.14.6; FT, p. 71; see also *De Cive* 1.7; EW II, p. 8, and *Leviathan* 1.14.1–2/33; MP, p. 189.

[61] "[T]he cause of war is not that men are willing to have it; for the will has nothing for object but good, at least that which seemeth good. Nor is it from this, that men know not that the effects of war are evil; for who is there that thinks not poverty and loss of life to be great evils?" (*De Corpore* 1.1.7; EW I, p. 7).

[62] *Leviathan* 1.13.14/14; MP, p. 188; *De Cive* 1.13; EW II, p. 12.

[63] *Leviathan* 1.13.14/14; MP, p. 188.

is demonstrable, because we make the commonwealth ourselves".[64] In both kinds of demonstrations reason must be presumed to possess genuinely active power, which goes against Hobbes' official account of all processes, including mental ones, as causal chains of motion.

What reason suggests, according to Hobbes' 'civil philosophy', is that people by mutual covenants renounce their natural right or liberty of doing anything to obtain more power. In other words, people promise not to hinder each other in the striving to maintain one's life.[65] The first precept of reason, or 'law of nature' in Hobbes' terminology, is that everyone ought to seek peace; according to the second one, each one should lay down the right to everything and "be contented with so much liberty against other men, as he would allow other men against himself".[66] The third law of nature is formulated in *Leviathan* as follows:

> [The third law of reason] is this, that men perform their covenants made: without which, covenants are in vain, and but empty words; and the right of all men to all things remaining, we are still in the condition of war.[67]

This interesting formulation deserves to be commented.

First, in which sense is it a law? What Hobbes clearly points out is a sharp distinction between laws of nature and civil laws; only the latter should properly be considered as laws in the sense of being commands of some authority.[68] The laws of nature should thus not be conceived as authoritative commands. Should we see them simply as laws of motion like laws in physics? This would agree best with Hobbes' official program. According to his kinematist theory, also the activities of reason should be conceived as bodily motions and the laws governing those activities as laws of motion.

In *De Cive*, the following definition of the law of nature is presented:

> [T]he law of nature, that I may define it, is the dictate of right reason, conversant about those things which are either to be done or omitted for the constant preservation of life and members, as much as in us lies.[69]

If we read this as saying that the behaviour of rational people follows, as a matter of fact, the general *conatus* principle, we have reached a

---

[64] *Six Lessons*, Dedication; EW VII, p. 183.
[65] *Leviathan* 1.14.6/33; MP, p. 190.
[66] *Leviathan* 1.14.5/33; MP, p. 190.
[67] *Leviathan* 1.15.1/41; MP, p. 201.
[68] *Leviathan* 1.26.8/45; MP, p. 314.
[69] *De Cive* 2.1; EW II, p. 14. See also *Elements of Law* 1.15.1; FT, p. 74, and *Leviathan* 1.14.3/33; MP, p. 189.

reductionist reading of the laws of nature in civil philosophy. As seen above, the *conatus* principle is, for Hobbes, a generalization of the law of persistence. It seems that he sees in this principle the possibility to unify physical and political explanations. This interpretation suggests a special kind of reading of the third law presented above: when guided by reason, people are going to perform their covenants because the endeavour generated by reason will continue until some extra-rational cause intervenes. The covenants represent the will of people, and every act of will, considered as an endeavour and thus as a motion, follows the law of persistence as necessarily as any other motion.

In point of fact, Hobbes' reductionism leaves no other option for him than to consider the laws of nature as laws of motion; the activities of reason *are* bodily motions. But obviously it will not do to think that all concepts and laws of physics, e.g. notions of impetus or pressure, should also apply to reasoning processes, or that what Hobbes presents as precepts of reason should regulate the motions of inanimate bodies as well. Hobbes himself points out certain important differences here. In the corporeal world nothing can act against the laws of motion, but precepts of reason are breakable; it is not impossible for people to act against the covenants they have made. Moreover, the discovering of the particular laws according to which natural bodies move is not a matter of human reason alone but requires empirical observation, whereas all the laws of nature on which civil society rests are found out purely by reason.[70]

These differences need not mean, however, that the laws of nature governing human conduct should be seen as something entirely separate from Hobbes' official kinematist theory of the corporeal world. I propose that the laws of nature in the Hobbesian science of politics are seen as laws governing the behaviour of *rational people*, in the same sense as the laws of motion govern the behaviour of inanimate bodies. They are derived from the general *conatus* principle and guide the striving of rational people to reach peace that will best guarantee the preservation of one's nature.[71] Whether or not they can be considered

[70] "[B]ecause of natural bodies we know not the construction, but seek it from the effects, there lies no demonstration of what the causes be we seek for, but only of what they may be", but "civil philosophy is demonstrable" (*Six Lessons*, Dedication; EW VII, p. 183).

[71] In one passage located in *Leviathan*, Hobbes writes that the laws of nature are easy to obey, because "they oblige only to […] an unfeigned and constant *endeavour*" (*Leviathan* 1.15.39/41; MP, p. 215, my emphasis). In another passage he describes laws of nature as

as laws of motion is a matter of how the endeavours of reason and will are conceived as motions. The most important difference between the endeavours of inanimate bodies and the striving of people guided by reason lies in the way the motions in question, however they are conceived, are *generated*, and not so much in the basic principles the striving in both cases follows—a fact that seems to have remained unnoticed by Hobbes.

On this picture, all rational individuals, i.e. persons moved by the active power of reason, enter into mutual covenants and keep them in virtue of their own nature alone, irrespective of any additional authority and in accordance with the basic laws of nature. However, Hobbes is obviously right in taking for granted that there are always those, forming perhaps even a majority, who are not rational but are either ignorant of the laws of nature or unconcerned with them. The fact that there are such 'wicked' individuals causes a serious problem for the 'righteous' people who follow the laws of nature:

> For though the wicked were fewer than the righteous, yet because we cannot distinguish them, there is a necessity of suspecting, heeding, anticipating, subjugating, self-defending, ever incident to the most honest and fairest conditioned.[72]

This is important: people striving to follow the guidance of reason in the state of nature have to live in a constant insecurity due to imperfect information about the character of neighbours and other fellow inhabitants.

A note on game-theoretical interpretations of the state of nature

It is almost a commonplace to depict the strategic situation in the Hobbesian state of nature game-theoretically as a 'prisoner's dilemma'.[73]

"qualities that *dispose* men to peace and to obedience" (*Leviathan* 2.26.8/45; MP, p. 314, my emphasis). In the general Hobbesian framework, endeavours and dispositions are motions, in this case motions originated in reason and running towards a certain end, a peaceful life.

[72] *De Cive*, Preface, paragraph 3/10; EW II, p. xiv.

[73] E.g. Brian Barry (*Political Argument*, pp. 253–254), John Rawls (*A Theory of Justice*, p. 269), J. W. N. Watkins ("Imperfect Rationality," pp. 202–223), and Edna Ullman-Margalit (*The Emergence of Norms*, pp. 62–73) have proposed the prisoner's dilemma interpretation.

This, however, seems to be in an important way misleading. For one thing, how people behave in the state of nature is not for Hobbes a matter of strategic choice at all but determined by the power of their passions and reason. But even if the Hobbesian situation is considered game-theoretically, it is not a prisoner's dilemma. Suppose I have made a mutual covenant with those in my neighbourhood not to hinder each other in the pursuit of happiness. My reason tells me to keep the covenant, but I am uncertain whether the others will do the same. If K means the choice of keeping the covenant and B of breaking it, the possible outcomes of my and some other individual's alternative choices are: [K, K], [K, B], [B, K], [B, B], where the first member of each pair represents 'my choice' and the second member the choice of 'the other'. Now, what is the preference ordering the reason urges me to follow?

The best outcome would of course be the state of peace which obtains when both parties keep the covenant, and the worst outcome the one in which I keep the covenant while the other party breaks it, thus endangering my life.[74] If both parties refuse to perform, they nullify the covenant and fall into what Hobbes calls a state of war where, however, they retain the natural right to defend themselves by all means they deem best. When I break the covenant one-sidedly, I am guilty of injustice against the other part, and this would clearly be contrary to reason, for it would not only endanger the prospects of common peaceful life but would also irritate the victim of my injustice to revenge.[75] But this is the outcome prisoner's dilemma puts on the top of the preference ordering, because, the reasoning goes, by breaking the covenant I would derive advantage from the other's not hindering my pursuit of happiness, and the other knows it. This is not what my *reason* tells me to do according to Hobbes' argument; breaking the covenant one-sidedly would definitely run against the laws of nature. So, in view of the above considerations, the preference ordering of a rational player would be as follows:

[K, K] > [B, K] > [B, B] > [K, B].

---

[74] "For he that should be modest, and tractable, and perform all he promises, in such time, and place, where no man else should do so, should but make himself a prey to others, and procure his own certain ruin, contrary to the ground of all laws of nature, which tend to nature's preservation" (*Leviathan* 1.15.36/41; MP, p. 215).

[75] "[W]hen a covenant is made, then to break it is unjust: and the definition of injustice, is no other than the not performance of covenant" (*Leviathan* 1.15.2/41; MP, p. 202).

This defines a strategic situation known as 'assurance game'.[76] There are two equilibrium states in this game, [K, K] and [B, B]. If I can be fairly confident of the rationality of the other player, that is, of his will to fulfil the covenant, then the only reasonable choice for me is also to keep it and thereby promote peace. But if I have plain doubts about the other's being a 'wicked' character, then it is reasonable for me to abandon the agreement even on the risk of possibly causing injury to the other.

Therefore mere agreements, however sincerely made, do not guarantee peace, but an authority powerful enough to prevent transgressions is needed. A mere 'image' of becoming attacked by a wicked person is enough to prevent the endeavour of rational persons to keep covenants. Hobbes' long argument for a peaceful political life culminates in his theory of sovereign, which institution turns out, I will argue, to represent essentially *active power* in the strong sense of the term.

The will and power of the sovereign

The Hobbesian sovereign is a political institution having the supreme right to make decisions in matters of safety and well-being of citizens, as well as possessing sufficient power to carry out the decisions. In *Leviathan*, the establishment of a sovereign is described as follows:

> The only way to erect such a common power […] is, to confer all their power and strength upon one man, or upon one assembly of men, that may reduce all their wills, by plurality of voices, unto one will.[77]

The sovereign represents in one unified will the will of all *rational* people, that is, of those who understand the precepts of reason to

---

[76] First introduced by Amartya Sen in his essay "Choice, Ordering and Morality". I have suggested the assurance game interpretation of Hobbes' argument in "Hobbes and the Prisoners' Dilemma". The most comprehensive and penetrating analysis of the Hobbesian situation, showing the role and power of both the prisoner's dilemma and the assurance game, is provided by Jean Hampton's *Hobbes and the Social Contract Tradition*, esp. pp. 67–68, 142–147. Later at least Andrew Alexandra ("Should Hobbes's State of Nature be Represented as a Prisoner's Dilemma?") and Eerik Lagerspetz (*The Opposite Mirrors*, pp. 203–204) have argued for the assurance game interpretation. The inappropriateness of prisoner's dilemma has been challenged by David Gauthier (*The Logic of Leviathan*, pp. 76–89) and by Alan Ryan ("Hobbes's Political Philosophy", pp. 224–225), although they do not refer to the assurance game.

[77] *Leviathan* 2.17.13/15; MP, p. 227.

peaceful life and will follow them. This means that a sovereign *necessarily* wills what each of the individual inhabitants wills under the guidance of reason—no more, no less. For this reason it cannot make unjust decisions:

> [B]ecause every subject is by this institution author of all the actions, and judgments of the sovereign instituted; it follows, that whatsoever he doth, it can be no injury to any of his subjects; nor ought he to be by any of them accused of injustice. For he that doth any thing by authority from another, doth therein no injury to him by whose authority he acteth: but by this institution of a commonwealth, every particular man is author of all the sovereign doth; and consequently he that complaineth of injury from his sovereign, complaineth of that whereof he himself is author; and therefore ought not to accuse any man but himself; nor himself of injury; because to do injury to one's self, is impossible.[78]

Everything a sovereign does is controlled by the power of reason representing people's common endeavour for secure and happy life, and no action against this endeavour can possibly arise from this power.

What is most notable here for the present purposes is that the will of a sovereign must be seen as active power in the sense of being capable of acting *in and by itself*, irrespectively of any other power. The sovereign will is of course bound to obey the laws of nature, but no other law or norm can possibly oblige a *supreme* will.[79] Nor can a sovereign as a purely rational institution be subject to short-sighted passions. According to Hobbes, the sovereign will is an indivisible power freely enacting civil laws, without any constraint external to its own power reason; it is a real unity not composed of divergent individual wills, "for powers divided mutually destroy each other".[80] In virtue of this unlimited inherent active power, a sovereign's will is a striving to a *permanent* protection of citizens. The institution of sovereignty is intended, Hobbes maintains, "for the perpetual benefit and defence of them that make it; which therefore men desire should last for ever".[81]

Without going into the problems concerned with the erection of a commonwealth in flesh, with living persons as rational sovereigns, we may state that the Hobbesian sovereign possesses the essential

---

[78] *Leviathan* 2.18.6/20; MP, p. 232.
[79] For Hobbes' argument, see *Leviathan* 2.29.9/23; MP, p. 367.
[80] *Leviathan* 2.29.12/23; MP, p. 368.
[81] *Elements of Law* 2.1.4; FT, p. 110. The purpose of the right of succession is to guarantee the continuity of the supreme active power among mortal sovereigns.

hallmarks of an active power. The acts of the sovereign's will are not links in a mechanical chain of motions, as Hobbes' official program would require, but prompted by the unified active power of reason of individual persons.[82] And in virtue of this power sovereigns unceasingly endeavour to preserve their 'eternal being' as the protection of people.[83] Accordingly, the Hobbesian commonwealths really are manifestations of the active power of reason.

Summary and concluding remarks

There are two ways of reading Hobbes' metaphysics, or as he prefers to call it, first philosophy. What he overtly pursues is an entirely materialist explanation of all kinds of phenomena in the world in terms of motion. The reductionist program led him also to define the notion of power or force in terms of motion, more specifically, in terms of indefinitely small motions he dubbed 'endeavours', thereby referring to the traditional notion of *conatus*. In his strictly 'kinematist' metaphysics active power means just the power of the agent, that is, the endeavour of a body by which it is supposed to move another body. Hobbes really considers endeavours as genuinely power-like entities: in terms of them he explains the persistence of bodies in their motions as well as such phenomena as causal impact, resistance, and pressure. However, conceived merely as motions the Hobbesian endeavours are not able to do the job imposed on them; in Alan Gabbey's words, "forces in general have evaporated completely from his system".[84] This being so, the notion of active power as it appears in Hobbes' official metaphysics bears little relevance to the issues at hand.

However, if we follow another reading suggested by certain assumptions Hobbes makes concerning God's role in the world, an entirely different view emerges. Most importantly, the idea of God as the

---

[82] Like God, the sovereigns are able to cause motions without being exposed to causal influence. They direct the behaviour of citizens free from external causal control. Indeed, Hobbes alludes to this fact when he speaks about the institution of the commonwealth: "This is the generation of that great *Leviathan*, or rather (to speak more reverently) of that mortal god, to which we owe under the immortal God, our peace and defence" (*Leviathan* 2.17.13/15; MP, p. 227).

[83] Hobbes indeed speaks of the right of succession as an 'artificial eternity of life' of sovereigns (*Leviathan* 2.19.14/23; MP, p. 247).

[84] "Force and Inertia in Seventeenth-Century Dynamics", p. 7.

immovable first mover bounds Hobbes, as a matter of fact, to assume a power not only capable of existing in itself but also of acting in the bodily world through the laws of motion—a truly Cartesian view Hobbes wanted to eschew in his official first philosophy. He failed to see (or perhaps more or less consciously refused to see) these implications because he carefully tried to avoid smuggling the ill-reputed medieval idea of 'occult' powers into scientific and metaphysical discussion, but, paradoxically, this attempt led him to a system bereft of a genuine notion of power he nevertheless needed and believed to have incorporated in it. Such a notion was at hand: the idea of God as exercising active power in the corporeal world would have saved the Hobbesian notion of endeavour as a genuine dynamic notion, although in the somewhat vague and ultimately mysterious Cartesian sense. To a great historical irony, this is what Hobbes should have inferred from his basic assumptions concerning God.

When the Hobbesian *conatus* is considered as an expression of a genuinely active power, the philosophical developments in which it figures become extremely interesting and historically important. The idea of *conatus* as an indefinitely small quantity of power (understood in Hobbes' official theory as motion) inspired Leibniz to develop his famous metaphysical world-explanation in terms of monads, and certain doctrines of Spinoza come surprisingly close to Hobbes' developments. In particular the idea that things preserve their identity as long as they maintain the endeavour they obtained at the beginning of their existence proved to be important. The endeavouring becomes to be seen as an 'inherent' power by which individuals are in a sense compelled to self-preservation: every thing necessarily strives to persevere in existence as far as it can by its own power. This *conatus* principle, central in Hobbes' moral and political doctrines, forms also the basis of Spinoza's ethics.

When we turn to Hobbes' political theory, the role of reason becomes conspicuous. Traditionally reason has been understood as an *initiative* power, and Hobbes seems to be no exception in this respect. It is reason that suggests the laws of nature by following of which a peaceful life can be attained, and the Hobbesian sovereign as an independent and autonomous judge in political matters provides a paradigmatic example of an agent led by the power of reason alone. Indeed, the sovereign power is nothing but a representation of the citizens' unified power of reason. It is obvious that Hobbes' official reductionism fails to give an adequate account of such rational activities, but if reason is taken

to be a manifestation of our inherent active power, then the human striving to follow the laws of nature to constitute a commonwealth with sovereign power can be understood to be nothing but striving for self-preservation. In this way, the general *conatus* principle can be retained even though the idea of reducing everything to bodily motions proves inappropriate in Hobbes' system.

The Hobbesian commonwealth is a pure construction of human reason. The natural laws conducting people to establish it are produced by reason, and it is governed by a sovereign representing the citizens' unified power of reason. Seen in this light, Hobbes provides another theory of an ideal state, and it is instructive to draw some parallels between it and Plato's construction. The basic aim of both is to guarantee the highest possible human happiness, but the visions of the nature of happiness and the means of achieving it differ radically in the two cases. For Plato happiness means harmony between the main functions of the human soul, for Hobbes satisfaction of desires arising from bodily pleasures. The difference is reflected in their views of how the political realm should be governed. Plato puts emphasis on the education of people, whereas Hobbes sees the most important duty of the sovereigns in the protection of individual citizens against potential attackers. According to both, however, the leaders should discharge their duties under the guidance of reason, but how will this be ensured? Plato's answer is: by careful training of the character of rulers. Hobbes' answer seems to be: by constant control of subjects; being dependent on the will of the subjects, the power of a mortal sovereign will become extinct if misused for selfish purposes and not for the protection of people.

In brief, the two models differ essentially with respect to the task assigned to the active power of reason. For Plato the reason should be made to work, through the control of bodily pleasures, for mental peace and harmony of people, whereas Hobbes sees its most important function in ensuring best possible conditions for the satisfaction of pleasurable passions and desires.

CHAPTER NINE

SPINOZA'S ACTUALIST MODEL OF POWER

Valtteri Viljanen

Introduction

It seems fair to say that Benedictus de Spinoza (1632–77) is not a thinker whose philosophical system would have traditionally been seen as particularly dynamistic in character, or considered in any special way associated with concepts connected with power—or with activity, for that matter. This is echoed in G. W. F. Hegel's estimation, declaring Spinoza's substance to be "a rigid and unyielding" one that "does not open itself out, and therefore comes to no vitality, spirituality or activity".[1] It is, however, defective to view Spinoza along these lines, for thereby it is not properly taken into account that such concepts as power (*potentia*), force (*vis*), and striving (*conatus*) frequently appear in his works, and in focal places. Fortunately, the pertinence of these notions is nowadays all the more often duly emphasized. Indeed, since the late 1960s French scholarship has acknowledged Spinoza's dynamistic tendencies widely enough for a recent commentator to contend, "Spinozism is generally (and justifiably) considered to be a philosophy of 'power' ".[2] Also on the other side of the Atlantic, power and related notions have begun to figure in many analyses of Spinoza's philosophy,[3] and interest in these aspects of his thought shows no signs of diminution.

---

[1] *Hegel's Lectures on the History of Philosophy* III, p. 288.

[2] Ramond, *Dictionnaire Spinoza*, p. 147, translation mine. Gilles Deleuze's *Expressionism in Philosophy: Spinoza* that appeared in the tumultuous year of 1968 is the key work; but already Sylvain Zac's *L'Idée de vie dans la philosophie de Spinoza* (1963) contains, I think, dynamistic overtones. For recent readings belonging to this tradition and classifiable as dynamistic, see Bove, *La stratégie du conatus*, Jaquet, *L'unite du corps et de l'esprit* and *Les expressions de la puissance d'agir chez Spinoza*; Rizk, *Comprendre Spinoza*; Sévérac, *Le devenir actif chez Spinoza*; Spindler, *Philosophie de la puissance et determination de l'homme chez Spinoza et chez Nietzsche*.

[3] Barbone, "What Counts as an Individual for Spinoza?"; Della Rocca, "Spinoza's Metaphysical Psychology" and "The Power of an Idea"; Garrett, "Representation and

All this notwithstanding, the main concept of the present anthology, active power, is not, to my knowledge, to be found in Spinoza's oeuvre. He does, however, employ the notion of power of acting (*agendi potentia*), especially in the *Ethics*. This raises the question, if Spinoza uses both 'power' and 'power of acting', what is the difference between the two? What else could power be, for Spinoza, but power of *acting*?[4] What is the relationship between power and activity in his system? It is by trying to find answers to these questions that I will endeavour to locate Spinoza's position with regard to the main topic of this volume; what is more, thereby emerges what may be called an actualist model of God's power.

Defining the basic concepts

Power in Spinoza's monism

We should begin by outlining the basic role the concept of power plays in Spinoza's system. Why does he allow it to his metaphysics in the first place? If we take a look at his masterpiece, the *Ethics*, 'power' makes its entrance in the eleventh proposition of the opening part—but merely in the second alternative demonstration and in the scholium of that proposition. Only near the end of the opening part we find the proposition that, to a great extent, assigns the dynamic concept its place in the Spinozistic framework:

Consciousness in Spinoza's Naturalistic Theory of the Imagination"; Huenemann, "The Necessity of Finite Modes and Geometrical Containment in Spinoza's Metaphysics"; Lin, "Spinoza's Metaphysics of Desire" and "Teleology and Human Action in Spinoza"; Parkinson, "Spinoza on the Power and Freedom of Man" and "Spinoza's Concept of the Rational Act"; Rice, "Action in Spinoza's Account of Affectivity" count among noteworthy Anglo-American studies. Juhani Pietarinen's ("The Rationality of Desires in Spinoza's Ethics" and "Spinoza on Causal Explanation of Action") work belongs to this tradition, and has been particularly inspiring for me; my *Spinoza's Dynamics of Being* attempts to give a unified view of the role of the concept of power in Spinoza's metaphysics (see also my "Field Metaphysic, Power, and Individuation in Spinoza" and "On the Derivation and Meaning of Spinoza's *Conatus* Doctrine").

[4] I would like to thank Don Garrett for pointing out to me this question and its importance.

> God's power [*potentia*] is his essence itself.[5]
>
> For from the necessity alone of God's essence it follows that God is the cause of himself (by p11) and (by p16 and p16c) of all things. Therefore, God's power, by which he and all things are and act, is his essence itself, q.e.d.[6]

For the moment we can leave aside the question of what, exactly, does it mean that 'all things follow from the necessity of God's essence', and simply focus on the fact that the quote above displays a clear connection between causal efficacy and power: the central idea seems to be that as God's essence causes everything there is, it must be equated with power. The demonstration is built on two very basic propositions, E1p11 and p16; this allows, I believe Spinoza to think, establishing a clear and unequivocal meaning to the concept of power by showing how it figures in his overall view of the fundamental causal architecture of the world. In that architecture, there is strictly speaking only one cause, the only substance, God or Nature, without which "nothing can be or be conceived" (E1p15). And precisely the propositions cited in E1p34d explicate God's basic causal capacities. First, to present things in an extremely brief manner, as existence is involved already in God's essence, God is the cause of himself and a necessarily existing being (E1p11); and so it can be said that God's causal efficacy results in his own existence. But, second, God is not only *causa sui* but also *causa rerum*, because from God's essence everything possible necessarily follows (E1p16); and so it can be said that God's causal efficacy results in active production of an infinity of modifications, also finite things such as human beings.

We are now in a position to delineate a rough working formulation of power in Spinoza's system: power means capacity to bring about effects; and given what Spinoza says about the nature of the effects of God's causality, it is only consistent that Spinoza talks about power both to exist and to act. With regard to finite things, the exact import of power's twofold meaning remains yet to be discerned, but at this point

---

[5] E1p34. I have used the following method in referring to the *Ethics*: a = axiom, app = appendix, c = corollary, d = definition (when not after a proposition number), d = demonstration (when after a proposition number), le = lemma, p = proposition, po = postulate, pr = preface, s = scholium. For instance, E1p8s2 refers to the second scholium of the eighth proposition in the first part of the *Ethics*.

[6] E1p34d.

it seems clear—and worth mentioning given the ill reputation that has overshadowed the modern history of the concept—that Spinoza shows no signs of considering this sort of notion of power as somehow obscure or in special need of defence: inserted into his philosophical system that tracks down the world thoroughly intelligible to its minutest detail, what we have is a completely proper and useful causal notion.

We should still observe one important aspect pertaining to power and Spinoza's peculiar monistic system: the radically novel philosophical theology of the *Ethics* is set up to give demystified—maybe one could say adequately 'philosophized'—accounts of such divine attributes as infinity, simplicity, eternity, and activity; no doubt, Spinoza's understanding of God's power is supposed to explicate what another traditional notion, that of omnipotence, really means. The tenet that God's causal power is ubiquitous in the world is, of course, a commonplace in philosophical theology,[7] and E1p34's claim that God's essence or power is ultimately responsible for everything there is can be regarded as its Spinozistic counterpart. Moreover and more interestingly, Spinoza's position can be depicted as a solution to the following old problem plaguing scholastic theology, the so-called problem of secondary causation.[8] Assigning powers to natural agents seemed to create a problem for the medievals, which is formulated by Francisco Suárez as, "to whatever extent efficient causality is attributed to the creature, to that extent the divine power of the creator is diminished. For either God does everything, or he does not do everything. The latter detracts from the divine efficacy".[9] In other words, as recent commentators have noted,[10] two fundamental tenets of scholasticism are in tension with each other: the omnipotence of the transcendent God and finite things' causal efficacy. And it is precisely here that Spinoza's immanent conception of divine power has its full

[7] As Alfred Freddoso ("Medieval Causation and the Case against Secondary Causation in Nature", p. 74) puts it: "Central to the western theistic understanding of divine providence is the conviction that God is the sovereign Lord of nature. He created the physical universe and continually conserves it in existence. What's more, He is always and everywhere active in it by His power. The operations of nature, be they minute or catastrophic, commonplace or unprecedented, are the work of His hands, and without His constant causal influence none of them would or could occur."

[8] Freddoso's "Medieval Aristotelianism and the Case Against Secondary Causation in Nature" offers a particularly enlightening treatment of this topic.

[9] *On Efficient Causality. Metaphysical Disputations 17, 18, and 19*, 18.1.2. It should be noted that Suárez (*ibid.*) himself did not think that this problem was a very serious one.

[10] Freddoso, "Medieval Causation and Case against Secondary Causation in Nature", pp. 77–78, 92–93; Des Chene, *Physiologia*, p. 251.

import. Now, Spinozistic finite things are modifications of God, and this allows Spinoza to hold that ultimately there is only one power, but one that is expressed "in a certain and determinate manner" through the essences of finite things. As Spinoza himself explains,

> [t]he power by which singular things (and consequently, [any] man) preserve their being is the power itself of God, *or* Nature (by 1p24c), not insofar as it is infinite, but insofar as it can be explained through the man's actual essence (by 3p7). The man's power, therefore, insofar as it is explained through his actual essence, is part of God *or* Nature's infinite power, that is (by 1p34), of its essence.[11]

Spinoza puts his point also the other way around by claiming that "the universal power of Nature as a whole is nothing but the power of all individual things taken together".[12] So, Spinoza holds unambiguously that we are dealing with immanent God's power in its different expressions, "God is the […] immanent cause of all things" (E1p18); as Don Garrett succinctly puts it, "whatever power singular things have is at the same time *also* (a share of) God's power, power that God expresses *through* singular things".[13] I think it is hard to deny that this scheme of things does a far better job than the traditional transcendental ones, be they of e.g. the Aristotelian or the Cartesian kind, in reconciling God's omnipotence with the causal power of finite things. Of course, how ever philosophically gratifying this kind of monistic dynamism may be, it comes with the price of heterodoxy.

Before moving on, a terminological observation is in order. In the *Ethics*, Spinoza uses both 'power' (*potentia*) and 'force' (*vis*), the former being the much more common one. On the whole, he seems to be using the two terms interchangeably: "The force of any passion, *or* affect, can surpass the other actions, *or* power, of a man, so that the affect stubbornly clings to the man" (E4p6).[14] In a couple of places he equates them without further ado: "[F]orce, *or* power" (E4p60d). "[T]here is also no comparison between the power, *or* [*seu*] forces, of the Mind and those of the Body" (E5pr, emphasis added). Thus, it is hard to say anything very specific about how the two notions possibly differ from each other; but judging from the contexts in which they

[11] E4p4d.
[12] *Theological-Political Treatise*, XVI.2.
[13] Garrett, "Spinoza's *Conatus* Argument", p. 140.
[14] See also E2p45s, 4pr, p3, p5, p18d, p26d.

are most often placed, 'power' seems to be the one Spinoza practically always uses when he is dealing with the most fundamental metaphysical issues, especially those that pertain to God, whereas 'force' is sometimes used when discussing dynamism pertaining to finite things. Apart from *potentia* and *vis*, there is also a third term often translated as 'power': *potestas*. As has been suggested, that notion refers to the control or authority an individual may obtain over its environment by exercising its *potentia*.[15]

Activity and Spinoza's essentialism

Spinoza defines activity as follows: "I say that we act [*agere*] when something happens, in us or outside us, of which we are the adequate cause, i.e. (by d1), when something in us or outside us follows from our nature, which can be clearly and distinctly understood through it alone" (E3d2). So, hardly surprisingly, also action is a causally potent notion. About the definition it can be safely observed that in Spinoza's technical usage, a thing is said to be active, or an agent, when it is the sole, complete, or total cause of an effect: a causal factor in addition to which nothing else is needed for the effect to be realized. And as it is an axiom for Spinoza that effects are known through their causes (E1a4), in such a case there is only one thing, the agent, on whom knowledge concerning the effect depends.

Things become more complicated, though, when attention is drawn to the fact that the definition contains a crucial explicative reference to what "follows from our nature" i.e., from our essence. The same phrase is, conspicuously enough, to be found also in the definition of passivity: "[W]e are acted on [*pati*] when something happens in us, or something follows from our nature, of which we are only a partial cause" (E3d2). In other words, that something follows from a thing's nature is fundamental for both activity and passivity, thus evidently a literally essential ingredient in any kind of causal occurrence. What is here at stake? When discussing the twofold meaning of power, we noted that in E1p34d Spinoza takes himself to be entitled to claim God to be the cause of all things on grounds of E1p16, the proposition arguably explicating the nature of God's activity. Also that pivotal proposition contains a reference to what follows from the essence:

---

[15] Barbone, "What Counts as an Individual for Spinoza?", pp. 102–104.

> From the necessity of the divine nature there must follow infinitely many things in infinitely many modes, (i.e., everything which can fall under an infinite intellect.)[16]
>
> This Proposition must be plain to anyone, provided he attends to the fact that the intellect infers from the given definition of any thing a number of properties that really do follow necessarily from it (i.e., from the very essence of the thing); and that it infers more properties the more the definition of the thing expresses reality, i.e., the more reality the essence of the defined thing involves. But since the divine nature has absolutely infinite attributes (by d6), each of which also expresses an essence infinite in its own kind, from its necessity there must follow infinitely many things in infinite modes (i.e., everything which can fall under an infinite intellect), q.e.d.[17]

The first corollary of this proposition is, "[f]rom this it follows that God is the efficient cause of all things which can fall under an infinite intellect" (E1p16c1).

We can start unpacking these startling claims by observing that they presuppose a theory of definitions, essences (or natures), inferring, and following. A detailed discussion of this intricate theory and its implications, as well as its relation to geometrical thought, is out of the scope of this paper,[18] but simplifying matters slightly the basic idea can be presented as follows. Each and every thing, also God, has its own peculiar essence; that essence is thoroughly intelligible, it can be perfectly captured by a definition. Both the essence and the definition have a certain structure: from the definition certain properties can be inferred, and this expresses those things that necessarily follow from—evidently, are brought about by—the essence in question. Now, little of this may be, at least for us, immediately transparent; but one sure conclusion we can draw is that each and every true Spinozistic thing is causally efficacious *by virtue of its essence*. This is confirmed by such later claims as "[n]othing exists from whose nature some effect does not follow" (E1p36) and "things are able [to produce] nothing but what follows necessarily from their determinate nature" (E3p7d).[19]

---

[16] E1p16.

[17] E1p16d.

[18] For a paper discussing these topics in length, see my "Spinoza's Essentialist Model of Causation".

[19] In fact, laying emphasis on this strand in Spinoza's thought is nowadays one prominent position in scholarship. Garrett holds, "[i]n Spinoza's view, something is an individual thing only to the extent that it has some nature or essence through whose genuine activity effects can be understood to follow" ("Teleology in Spinoza and Early

Thus, it is only consistent that Spinoza equips his definition of action with the reference to essential 'following'; and given the linkage between power and causal efficacy, we can say that due to this essential causal thrust, Spinozistic things are endowed with power to bring about effects derivable from their definitions. In Spinoza's world, the ultimate source of power is located in essences—from the adequate monistic viewpoint, in God's essence. Thus, Spinozistic things can be said to be intrinsically dynamic in character, and when a thing accomplishes something by its own essential causal power alone, with no input from other causes, it qualifies as an agent.[20] On the uncontroversial assumption that things have power of acting when they are active, such a case equals exercising power of acting in bringing about the effect in question. With these basics in place, we can start fleshing out answers to the questions posed in the beginning of this paper.

The actualist model of God's power

Necessitarianism and power

It is uncontroversial that Spinoza's God can be only purely active, ultimately the adequate cause of each and every thing (see E1p25). This is so already because there is nothing else besides God's power that could bring about effects. But things appear more interesting, and challenging, when we consider the way in which God's power is

---

Modern Rationalism", p. 330), and "an individual […] exists to the extent that there is instantiated a definite essence or nature that can serve as a locus of causal activity. Where there is such an essence, properties follow (both causally and logically) from that essence" ("Spinoza's *Conatus* Argument", p. 150). Martin Lin, another proponent of this line of interpretation, puts things even more to the point: "[T]hings are causally efficacious only in virtue of their essences" ("Teleology and Human Action in Spinoza", p. 343).

[20] In fact, here lurks a problem, to my knowledge first formulated by Martha Kneale ("Leibniz and Spinoza on Activity", p. 217):

> One surprising proposition is involved in Definition II, namely, that something can happen outside a given mode which can be clearly and distinctly understood in terms of the nature of that mode alone. This is surprising because the general doctrine of Part II of the *Ethics* seems to imply that any transaction involving two or more modes can be fully understood only in terms of the nature of all of them.

I believe a fairly satisfactory answer can be given to this dilemma (see my *Spinoza's Dynamics of Being*, chapter 5); but discussing this would take us too far afield.

exercised. Here Spinoza's dynamism meets his necessitarianism.[21] One of the longest scholia of the first part of the *Ethics* reveals Spinoza's mindset concerning these matters:

> Others think that God is a free cause because he can (so they think) bring it about that the things which we have said follow from his nature (i.e., which are in his power) do not happen or are not produced by him. But this is the same as if they were to say that God can bring it about that it would not follow from the nature of a triangle that its three angles are equal to two right angles; *or* that from a given cause the effect would not follow—which is absurd. […]
>
> Moreover, even if they conceive God to actually understand in the highest degree, they still do not believe that he can bring it about that all the things he actually understands exist. For they think that in that way they would destroy God's power. If he had created all the things in his intellect (they say), then he would have been able to create nothing more, which they believe to be incompatible with God's omnipotence. So they preferred to maintain that God is indifferent to all things, not creating anything except what he has decreed to create by some absolute will.
>
> But I think I have shown clearly enough (see p16) that from God's supreme power, *or* infinite nature, infinitely many things in infinitely many modes, i.e., all things, have necessarily flowed, or always follow, by the same necessity and in the same way as from the nature of a triangle it follows, from eternity and to eternity, that its three angles are equal to two right angles. So God's omnipotence has been actual from eternity and will remain in the same actuality to eternity. And in this way, at least in my opinion, God's omnipotence is maintained far more perfectly.
>
> Indeed—to speak openly—my opponents seem to deny God's omnipotence. For they are forced to confess that God understands infinitely many creatable things, which nevertheless he will never be able to create. For otherwise, if he created everything he understood [NS: to be creatable] he would (according to them) exhaust his omnipotence and render himself imperfect. Therefore to maintain that God is perfect, they are driven to maintain at the same time that he cannot bring about everything to which his power extends. I do not see what could be feigned which would be more absurd than this or more contrary to God's omnipotence.[22]

Undoubtedly, this kind of power should not be confused "with the human power or right of Kings" (E2p3s). But at least two interrelated subtler

---

[21] It has been a contested issue whether Spinoza is a necessitarianist or merely a causal determinist; but I take it that Garrett ("Spinoza's Necessitarianism") and Olli Koistinen ("On the Consistency of Spinoza's Modal Theory"; "Spinoza's Proof of Necessitarianism") have convincingly showed the former to be the case.

[22] E1p17s.

points emerge from the quote above. First, God's power could not be exercised in any other manner it is actually exercised any more than a triangle could have some other sum of internal angles it actually has. Second, all God's power is completely used in bringing about all he can understand, i.e. in realizing what can be inferred from his definition.[23] The upshot is that there is *no unexercised power, all power is exercised with an ironclad necessity*. In Spinoza's necessitarianism, there are neither unrealized possibilities nor power that would remain merely potential.

Here we can, I think, especially acutely feel the impact the new science has on Spinoza's thought. In the Peripatetic framework, natural changes were understood as end-governed actualisations of potentialities. Now, already the fact that the very word 'power' is in Latin '*potentia*' implies that this had a major effect on how power was conceived: powers are *potential capacities* for change that, if exercised, end in something actual.[24] For instance, a seed has the power or potential to become a tree; if placed in suitable circumstances, the exercise of that power begins and becomes manifested as an actual tree. With the dawn of the modern era, things begin to look quite different. Consider how radically Descartes' mechanics-inspired view on material things' power differs from the Aristotelian one: in the *Principles of Philosophy*, he considers any body to have a force (*vis*) understood simply as a tendency to persist in the prevailing state (PP II.43; CSM I, 243), and the intensity of this force can be measured in terms of speed and size.[25] Clearly, the Cartesian notion of force has no essential connection with actualisation of potentialities. What we are dealing with is actual causal efficacy of a certain strength and direction.

It is precisely the traditional potential-actual framework that Spinoza discards, thereby following the example set by Descartes. As Bernard

---

[23] Pascal Sévérac (*Le devenir actif chez Spinoza*, pp. 33–35) stresses, rightly, that God's power is always completely exhausted in producing everything it can. Also Alan Donagan ("Spinoza's Proof of Immortality", p. 248) has drawn attention to this: "As he [Spinoza] used the word, '*potentia*' fundamentally means power displayed in doing something. In God there is no *potentia* that is not exercised. Hence God's power and his action are not really distinct: whatever he has power to do, he does."

[24] See Des Chene, *Physiologia*, pp. 23, 29.

[25] See PP II.36, II.43 (CSM I, pp. 240, 243); Gabbey, "Force and Inertia in the Seventeenth Century", p. 243; Garber, "Descartes and Spinoza on Persistence and Conatus", pp. 44–45; Des Chene, *Physiologia*, p. 340.

Rousset observes, being *in potentia* was traditionally contrasted with, and thought to be inferior to, being *in actu*, because the former was taken to mean that one has not yet been realized. But this distinction does not hold for Spinoza: being powerful ('*in potentia*') is to be actual.[26] Consider also the way in which Leibniz summarizes the traditional position: "If 'power' corresponds to the Latin *potentia*, it is contrasted with 'act', and the transition from power into act is 'change'."[27] But as the above-quoted scholium testifies, there is no such contrast in Spinoza's system, and Spinoza himself stresses the actuality of power by contending, "God's omnipotence has been actual from eternity and will remain in the same actuality to eternity" (E1p17s). This kind of actualism clearly stems from his necessitarianism, and as a consequence it is fitting, I think, to regard this as an *actualist* view to power. In contemporary metaphysics of modality, actualism is a main overall position whose general idea can be said to be that there is only one world, the actual physical one, and the only existent things are those inhabiting that actual world.[28] Although there is undoubtedly no room in Spinoza's ontology for any other world than the actual one, it would, of course, be bizarre and misleading to depict him as taking a stand in a contemporary debate. If, however, actualism is defined loosely as an ontological position according to which there are no unactualized possibilities,[29] Spinoza surely counts as an actualist,[30] and so does his view of power. There is thus no discrepancy between Spinoza's necessitarianism and dynamism; together, they amount to what may be called the actualist view of God's power.

---

[26] Rousset, "Les implications de l'identité spinoziste de l'être et de la puissance", p. 11. Charles Ramond (*Dictionnaire Spinoza*, p. 147) notes similarly that for Spinoza power does not carry the traditional connotation of incompleteness or virtuality (see also Misrahi, *100 mots sur l'*Éthique *de Spinoza*, p. 308; Rizk, *Comprendre Spinoza*, pp. 45–46).

[27] *New Essays on Human Understanding* 2.21.

[28] Lycan, "The Metaphysics of Possibilia", p. 307.

[29] Here I am following Timo Kajamies ("Descartes: Libertarianist, Necessitarianist, Actualist?", p. 53), who examines the debate concerning Descartes' alleged actualism and necessitarianism.

[30] Kajamies discusses briefly also Spinoza's case as a preliminary to that of Descartes and contends, "Spinoza famously endorsed full-blown actualism" ("Descartes: Libertarianist, Necessitarianist, Actualist?", p. 83).

Power of acting and the actualist model

The discussion thus far has mostly been structured around Spinoza's monistic commitments. I think this is justified, for otherwise his 'big picture' would be left in the dark, most probably resulting in flawed understanding of his thought. On the present interpretation, Spinoza develops an actualist model of God-Nature's power in which everything is what it is and the way it is because all possibles (i.e. everything derivable from God's definition) are realized by God's power as necessitated by the laws of God's nature. Fair enough; but what does this tell us about finite power, existence, and action? Similarly, we have seen that exercising power of acting means being the only causal source of, the only power behind, some effect. With regard to God, this makes the answer to the basic question posed in the beginning—what else could power be but power of acting?—evident: nothing. God's power can only be active, so his power equals power of acting. Once again, fair enough; but what about the situation in which we finite existents find ourselves? Spinoza's actualist view of God's power has ample implications for his theory of finite things' power, and it is precisely here that things become considerably more complicated.

We can begin by noting the general importance of the notion of power of acting: it does a remarkable amount of work in Spinoza's theory of human existence. In the third part of the *Ethics*, which deals with the origin and nature of human emotions (or affects), the concept is in play right from the start. The main topic is defined in its terms:

> By affect I understand affections of the Body by which the Body's power of acting is increased or diminished, aided or restrained, and at the same time, the ideas of these affections.[31]

So human emotions are, ultimately, *changes* in our power of acting. From what has been said about God's power, it follows that his power of acting cannot undergo change but is always unlimited, or as Spinoza would say, infinite; but, obviously, this is not our case. The following passage tells us something decisive about the notion's role in Spinoza's system:

> But the main thing to note is that when I say that someone passes from a lesser to a greater perfection, and the opposite, I do not understand that he is changed from one essence, *or* form, to another. For example, a

[31] E3d3.

> horse is destroyed as much if it is changed into a man as if it is changed into an insect. Rather, we conceive that his power of acting, insofar as it is understood through his nature, is increased or diminished.[32]

In other words, changes in power of acting can occur while the individual retains its identity (its 'essence or form' does not change—or, presumably, does not become destroyed). This reveals that Spinoza uses the concept of power of acting in order to explain changes of perfection taking place in temporal individuals; and, obviously, for his ethical theory the most notable kinds of changes in power are those that result in human emotions.

Power of acting pertains, however, only to those cases in which we are active; and, finite and limited creatures as we are, not all of our power is exercised to bring about actions. Remember that also patients are, according to Spinoza's definition, causally powerful: we are passive "when something happens in us, or something follows from our nature, *of which we are only a partial cause*" (E3d2, emphasis added). A partial cause, but a cause nevertheless. We can, I think, now begin to see why 'power' and 'power of acting' cannot be identified without further ado. There is a core sense of 'exercising power': being able to cause effects, operating as a causal factor in a causal occurrence; but not all factors involved in causal occurrences are agents. I think Spinoza would say that those factors exercise power, but not power of acting. Presumably, they could be said to exercise power of existing, for even under the influence of external causes, things strive to maintain their existence, as Spinoza's famous doctrine of *conatus* power states (E3p6, p7).

I would like to suggest that the actualist line of thought concerning God's power underpins Spinoza's theory of finite human existence in the following manner. All of our power is always completely exercised. There is no power that could remain to any degree potential: things are always fully causally operative,[33] and are so of their own accord. In plainer words, all finite individuals always do everything they can.[34] Things always use all of their power to full measure, what alters is the

---

[32] E4pr.

[33] This does not, however, mean that the amount of an individual's total power could not alter, just that whatever power an individual is endowed with is always exhaustively exercised.

[34] My account is in concordance with what Donagan ("Spinoza's Proof of Immortality", pp. 248–249) says about power of acting (although he seems to mean by it what I would call simply power) of finite things: "[I]t does not follow, in Spinoza's view, that the power of acting of a finite thing is not necessarily exercised. Finite things differ

way in which and the extent to which this power is used to produce actions, to which extent passions. Precisely this interests Spinoza the most, and is what he finds ethically relevant: clearly, the aim of Spinoza's ethics is to be maximally active, to have a lot of power of acting, to produce actions the nature of which depends wholly on our own essence.

The aforesaid has taken place at an admittedly general and abstract metaphysical level. How could the exercise of *agendi potentia* be illustrated? When someone is having a high level of power of acting, how does it appear at the surface phenomenal level? An answer to this question that would probably be shared and accepted by many scholars is that having power of acting equals, roughly, being capable of behaving in many different ways so that one has power over one's environment.[35] Now, there is no doubt truth in this; it is very important for us to exercise our power of acting so that we cause certain aspects of effects that inhere in other things, because this allows us to control over our environment,[36] without which forming societies and ensuring suitable material conditions for fulfilling human life would be impossible. However, this is hardly the ultimate goal of Spinoza's ethics but only the means to the sort of exercise of our power of acting that equals, for Spinoza, true freedom and happiness: adequate causing of immanent effects, that is, forming adequate ideas in our minds.[37] Moreover, these changes in the level of our activity form the basic causal architecture of our emotions: to the extent our striving power is hindered, we feel sadness, and to the extent we succeed in freely exercising our own power, we feel joy.

To round off this discussion and to obtain still a sharper view of Spinoza's line of thought, let us consider some notable differences between Spinoza's position stemming from his actualist cast of mind

---

from infinite ones in that their power of acting is limited by other finite things. […] Strictly speaking, everything at every moment exercises its full power of acting."

[35] This characterization contains features of those made by Carriero, "Spinoza on Final Causality", p. 130; Matheron, *Individu et communauté chez Spinoza*, p. 46; Rice, "Action in Spinoza's Account of Affectivity", p. 157.

[36] On grounds of Barbone's ("What Counts as an Individual for Spinoza?", pp. 102–104) interpretation, we may in such cases be said to have *potestas* that derives from our *potentia*.

[37] Spinoza writes in the *Theological-Political Treatise*, III.7–8, "much can be effected by human contrivance and vigilance to achieve security and to avoid injuries from other men and from beasts" by organizing a society or state, the purpose of which "is to achieve security and ease". Without this ease, I take it, it would be impossible to engage in intellectual activities.

and some dominant traditional conceptions of natural things' power and causality. First, the idea that things are fully causally efficacious left to their own devices, needing nothing extrinsic to act, is radically at odds with the familiar Thomist tenet, "what is in potency cannot reduce itself to act".[38] For Aristotle and Aquinas, any transition from potentiality to actuality and, consequently, to activity, can only be brought about by something actual;[39] "[t]he Aristotelian does not suppose that the inceptions of a thing's changes can be referred to that thing's nature alone".[40] Second, the Aristotelian powers are potentialities that turn into actualities if certain processes are triggered into action. This seems to imply that the extent in which things exercise their power varies; but according to Spinoza's view, all power is always exhaustively used as necessitated by laws of God's nature, and there is definitely no room for potentialities that would not become actualized. Third, although Spinoza refuses to adopt the traditional notion of passive power, his system nevertheless contains the idea that any thing's active power matches its power—given Spinoza's terminological choice, we should probably say liability—to be under passions. In Spinozistic terms, there is a connection between *the power of acting* and *the capacity to be affected*, so that the capacity of being affected in many different ways corresponds to a great power of acting:

> I say this in general, that in proportion as a Body is more capable than others of doing many things at once, or being acted on in many ways at once, so its Mind is more capable than others of perceiving many things at once.[41]

> Whatever so disposes the human Body that it can be affected in a great many ways, or renders it capable of affecting external Bodies in a great many ways, is useful to man; the more it renders the Body capable of being affected in a great many ways, or of affecting other bodies, the more useful it is [*eo utilius, quo Corpus ab eo aptius redditur, ut pluribus modis afficiatur, aliaque corpora afficiat*]; on the other hand, what renders the Body less capable of these things is harmful.[42]

---

[38] Thomas Aquinas, *The Principles of Nature*, III.18.

[39] James, *Passion and Action*, p. 35. On the Aristotelian principle of prior actuality, see pp. 82–86 in this volume.

[40] Des Chene, *Physiologia*, p. 22. However, there is an important qualification to this: "Self-movement, or what Averroes called the *vis initiativa*, is in fact the delimiting feature of animate things" (*ibid.*).

[41] E2p13s.

[42] E4p38.

As we know, talented people, having extremely complexly structured minds and bodies, are not only capable of causing many different kinds of effects but are also sensitive to many different kinds of sorrow.

Conclusion

I hope to have shown that Spinoza provides a compelling theory of the basic causal architecture of the world by combining the necessitarianist monistic ontology with certain ideas stemming from the new science. In this original dynamistic metaphysic there is, *sub specie æternitatis*, only one causal agent, God, whose nature fixes "from eternity and to eternity" those possibilities his power necessarily realizes; there cannot be any unactualized possibilities, which justifies labelling this line of thought an actualist one. According to it, God's power can only be power of acting; but, alas, this is not so in our case, for even though our power is always fully exercised, there are changes in the degree in which it brings about actions. And these are not just any changes among others, for only those changes that affect our power qualify, for Spinoza, as ethically significant.[43]

[43] I would like to thank Olli Koistinen, Juhani Pietarinen, and Arto Repo for many helpful comments, as well as the audiences at the University of Turku and Uppsala University, in which I have presented earlier versions of this essay.

CHAPTER TEN

LEIBNIZ ON FORCE, ACTIVITY, AND PASSIVITY

Arto Repo and Valtteri Viljanen

Introduction

It is no exaggeration to say that the concept of force (*vis*) was *the* key concept for Gottfried Wilhelm Leibniz (1646–1716), both in metaphysics and in physics. In metaphysics, it is only by conceiving force as the essence of all individual substances that we can, according to Leibniz, understand how there can be created, finite substances at all, dependent upon God—the infinite necessary substance—in some fundamental manner, but at the same time fulfilling the necessary conditions of substancehood—independence, activity, and persistence—and thus truly describable as substances. In physics, it is only by taking force as the basic concept we can derive the correct fundamental laws of motion for bodies. In this chapter, we shall first look at how Leibniz understands his key concept and some of the roles it plays in his thought. This examination will explicate not only how Leibniz's emphasis on force or power squares well with (and most probably largely stems from) his endorsement of certain central Aristotelian tenets, but also how the concept of force is incorporated into his mature idealist metaphysics. That metaphysics, in turn, generates some thorny problems with regard to the concept of passivity; and so we shall also ask whether and how Leibniz's monadology, emphasizing the activity as much as it does, is able to encompass the passivity of created substances.

The dynamistic conception of physics

It is well known that Leibniz champions a physical theory he calls 'dynamics'.[1] But why does the concept of force hold such a preeminent

[1] See the beginning of *Specimen Dynamicum*: "Ever since we made mention of

position in his physics? Comparing Leibniz's views to those of Descartes offers an instructive starting point for answering this question. According to Leibniz, the Cartesians endorsed a fundamentally flawed conception of the corporeal nature. We can discern at least two different kinds of argumentative strategies Leibniz adopts to show that Descartes and his followers are mistaken; the first strategy concerns the way in which force is formulated in physics while the second strategy is more philosophical, or metaphysical, in character.

In 1686, Leibniz published a short article in *Acta Eruditorum*, "A Brief Demonstration of a Notable Error of Descartes and Others Concerning a Natural Law",[2] where he criticized the view of Descartes that the most important conserved quantity in nature is the so-called quantity of motion, a quantity which is proportional to the mass (or volume) and the velocity of bodies. Leibniz argues that the 'motive force' of the body is not the same as its quantity of motion, and that it is the motive force that is conserved. From the point of view of physics, Leibniz's argument against the Cartesians is straightforward. It is plausible to say that in the following two cases,

(1) body A with mass m falls from height h
(2) body B with mass 4m falls from height h/4

the bodies in question acquire the same 'force' in the sense that they are both capable, after the fall, of lifting a mass m to the height h (friction and air resistance ignored). This is because it is natural to say that the task of lifting a body to some height requires the same amount of work (using now only an intuitive notion of work) as does the task of lifting the same body four times to fourth of that height. But this equal force of the two bodies cannot be identified with their quantity of motion (mv) simply because that quantity is not the same in both cases. One needs simply to apply Galileo's formula for accelerating bodies, and the result is that the speed acquired by body A is only twice the speed acquired by B. Thus the quantity of motion of A after the fall is only half of the quantity of motion of B. But if we take the speeds squared, we get a quantity (mv^2) which is the same in both cases. As Leibniz says

establishing a *New Science of Dynamics* […]" (AG, p. 118). Presumably, Leibniz contrasts his dynamics with kinematics, the study of motion, which does not refer to dynamic concepts.

[2] L, pp. 296–302.

in *Discourse on Metaphysics*, "[n]othing is simpler than this proof".[3] What is more intriguing is that Leibniz claims that this observation has important consequences for metaphysics, as we will show below.

However, it may be asked, are the two quantities (mv and mv^2) really so different? Leibniz's own preferred quantity, after all, involves the same simple quantities as Descartes' quantity of motion, namely mass and speed. It may be that what Leibniz had in mind when he spoke about the metaphysical consequences was not so much the two formulas themselves but the arguments which led to them. In Leibniz's argument, one important step was to consider the ability to do work acquired by the two bodies. The ability to do something, ability to produce certain effects, was, for Leibniz, the defining characteristic of the concept of force. Thus he can claim to have demonstrated that we must use this concept in our physical explanations of phenomena in order to acquire the right results.[4]

The second line of argument concerns the source of the error made by Descartes and others: it lies, Leibniz thinks, in their geometrization of matter, or the Cartesian view that the essence of matter is extension. Against this, Leibniz holds that the innermost nature of matter is to be conceived as force. In a letter to de Volder dating from 1699, Leibniz presents his reasoning as follows. It is true that material things are necessarily extended, but extension itself can only be understood by reference to the inherent force in bodies, because the concept of extension is analyzable into ("can be resolved into") the concepts of plurality, continuity, and coexistence, and the concept of something extended presupposes reference to something which is repeated and continued—and this something is force:

> So I believe that our thinking is completed and ended in the concept of force rather than in that of extension.[5]

Thus, the idea is that a proper analysis of matter inevitably leads us to the concept of force. But why precisely force and not something else

[3] AG, p. 51.

[4] It is well known that the equation Leibniz proposed for the calculation of the motive force is close to what later came to be known as kinetic energy. Max Jammer's description is to the point: "Strictly speaking, Leibniz's concept of force is what we call today kinetic energy, but conceived as inherent in matter and representing the innermost nature of matter" (*Concepts of Force*, p. 158).

[5] L, p. 516.

that would serve as the underlying basis for repetition and continuation? In his *On Nature Itself* Leibniz elaborates his position:

> [T]he very substance of things consists in a force for acting and being acted upon. From this it follows that persisting things cannot be produced if no force lasting through time can be imprinted on them by the divine power. Were that so, it would follow that no created substance, no soul would remain numerically the same, and thus, nothing would be conserved by God[.][6]

This passage points toward Leibniz's staunch opposition to occasionalism: if things had no proper causal power of their own, even God could not conserve their existence.[7]

To obtain a firmer grasp of what underpins Leibniz's philosophical position, we should be particularly alive to his approval—especially emphatically expressed during his so-called middle period of 1680s and 90s—of the Aristotelian-scholastic doctrine of substantial forms as something we must necessarily posit in order to have a proper philosophical foundation for the world of extended bodies. True to his conciliatory cast of mind, Leibniz was eager to soften the conflict between modern mechanical philosophy and the traditional Aristotelianism, and as part of that project he emphasized the distinction between physics and metaphysics. The concern of the former is the explanation of particular phenomena of nature; one should not rely on any metaphysical principles in explaining these phenomena. Changes in the realm of physical phenomena are determined through efficient causality, and everything is explainable mechanistically by referring only to size, shape, and motion of bodies. In this Leibniz was one of the most consistent followers and developers of the new mechanical physics.[8] But still, at a more fundamental level, the principles relied on in physics must be based on metaphysical principles:

---

[6] AG, pp. 159–160.

[7] For other reasons for Leibniz to reject occasionalism, see below. Moreover, note that here Leibniz nicely accords with what the Eleatic Stranger of Plato's *Sophist* suggests as the distinguishing mark of real existents; see Pietarinen's contribution on Plato in this volume (pp. 12–13).

[8] One should perhaps note at this point that this does not mean that Leibniz accepted Newton's physics. Newton's postulation, in the *Philosophiae naturalis principia mathematica* (1687) which Leibniz of course knew, of absolute space and time, and in particular the postulation of the force of gravitation between all the bodies of the universe, was, for Leibniz, unfounded and metaphysically unsound. Leibniz famously criticized many aspects of Newton's thought in his correspondence with Clarke. With regard to the postulation of different kinds of forces in physics, Leibniz's view becomes clear in

> [W]e acknowledge that all corporeal phenomena can be derived from efficient and mechanical causes, but we understand that these very mechanical laws as a whole are derived from higher reasons.[9]

Without proper metaphysics we cannot understand the form of the laws of physics, and for Leibniz it was not an option to consider the laws of physics as brute givens, without any deeper explanation. That deeper explanation was to be found, according to Leibniz, in philosophical principles much like to those defended by the Aristotelians. Daniel Garber has argued that not only laws of motion but the unity of bodies as well remains a mystery, in Leibniz's view, without the introduction of substantial forms.[10] The Cartesians held that all bodies, no matter how small, are always further divisible, and as such, Leibniz thinks, they cannot but fall short of being true substances. The following famous passage from his correspondence with Arnauld presents this in a striking fashion:

> I think that a slab of marble is perhaps only like a heap of stones, and so could never pass for a single substance, but only for an assemblage of many substances. For imagine there were two stones, for example the diamond of the Grand Duke and that of the Great Mogul. We can use a singly collective noun to do service for both of them, and say that they are a pair of diamonds, although they are a long way apart from one another; but we would not say that they constitute a substance. Now, matters of degree play no part here. If we gradually bring them closer together, therefore, and even bring them into contact, they will not be any more substantially united. And if when they were in contact we joined them to some other body which prevented them from separating—for example, if we mounted them in a single ring—the whole thing would make up only what is called *unum per accidens*. Because it is as if by accident that they are forced to move in unison. I therefore hold that a slab of marble is not a single complete substance, any more than the water in a pond together with all its fish would be, even if all the water and all the fish were frozen together… There is as much difference between a substance and a being of that kind as there is between a man and a group such as a nation, an army, a society, or a college; these are moral beings, in which there is

---

the following passages: "That physics which explains everything in the nature of body through number, measure, weight, or size, shape and motion, and so teaches that, in physics, everything happens mechanically, that is, intelligibly, […] this physics seems excessively clear and easy" (AG, p. 312). "It is permissible to recognize magnetic, elastic, and other sorts of forces, but only insofar as we understand that they are not primitive or incapable of being explained, but arise from motions and shapes" (AG, p. 313).

[9] AG, p. 126.

[10] "Leibniz and the Foundations of Physics", pp. 31–35.

> something imaginary, or something which depends on the inventions of our minds. Substantial unity requires a complete indivisible being, which is indestructible by natural means, because its notion contains within itself everything that is ever going to happen to it. Such a thing could never be found in either shape or motion, each of which indeed contains within itself something imaginary, as I have just shown, but *only in a soul or substantial form*, something like what I call myself.[11]

This long passage contains a wealth of important ideas, but we can highlight the claim that something akin to the substantial form—which was traditionally seen as the feature that, when united with matter, made a complete substance of a certain kind—must be presupposed in order for there to be real bodies in the first place.[12] Moreover, as the end of the passage indicates, it is through the knowledge we have of ourselves that we can gain insight into the unificatory character of these forms.

Still, it may be asked, what does all this have to do with force? The scholastics commonly conceived substantial forms as the loci of activity in things;[13] as Suárez puts it, "form is essentially act",[14] "[m]atter is not the principle of any action".[15] Substances behave in certain characteristic ways in virtue of their forms, or as Suárez suggests, "it is probable that the substantial form has a certain power for having its proper accidents emanate from it"; for instance, water, after having been heated and then left to its own devices, has the power to make itself colder due to its form.[16] In tune with this, the scholastics widely rejected—as we have seen Leibniz doing—occasionalism; as Alfred Freddoso puts it, "[t]he medieval Aristotelians exhibit little patience with those who espouse occasionalism or theories closely resembling it".[17] That substances are causally efficacious or powerful is something that both scholastic Aristotelians and Leibniz unhesitatingly endorse.

The aforesaid means that the substantial form can be characterized as a kind of power that makes the substance a true unity endowed with efficacy to cause certain kind of effects. It seems to us that this sort of idea underpins Leibniz's willingness to equate substantial forms with

---

[11] WF, pp. 117–118; the latter emphasis added.
[12] See Garber, "Leibniz and the Foundations of Physics", p. 32.
[13] For an instructive discussion of this, see Pasnau, "Form, Substance, and Mechanism".
[14] *On the Formal Cause of Substance: Metaphysical Disputation XV*, 5.3.
[15] *On Efficient Causality. Metaphysical Disputations 17, 18, and 19*, 18.2.1.
[16] *On Efficient Causality. Metaphysical Disputations 17, 18, and 19*, 18.3.4.
[17] Freddoso, "Medieval Causation and the Case against Secondary Causation in Nature", p. 99.

metaphysically understood power. The following passage nicely sums up Leibniz's view concerning the topic at hand:

> Therefore, I concluded from this that, because we cannot derive all truths concerning corporeal things from logical and geometrical axioms alone, that is, from large and small, whole and part, shape and position, and because we must appeal to other axioms pertaining to cause and effect, action and passion, in terms of which we can explain the order of things, we must admit something metaphysical, something perceptible by the mind alone over and above that which is purely mathematical and subject to the imagination, and we must add to material mass [*massa*] a certain superior and, so to speak, formal principle. *Whether we call this principle form or entelechy or force does not matter, as long as we remember that it can only be explained through the notion of forces*.[18]

Thus, the notion of force or power is important both for Leibniz's physics as well as for his metaphysics. The textual source that best explicates how Leibniz saw the relationship between physics, metaphysics, and the notion of force during his middle period is a writing he published in 1695, *Specimen Dynamicum*. According to its whole title, this essay shows the "astonishing laws of nature concerning the forces of bodies and their actions on one another" and traces these laws "to their causes". By 'their causes' Leibniz means the metaphysical underpinnings of the laws of nature. Thus he is here concerned both with physics and metaphysics, although it is the importance of different kinds of forces in physical explanations which obtains most attention. The explicit aim of the essay is to delineate the foundations of a whole new science to which, as we have seen, Leibniz refers as "a new science of dynamics".

Specimen Dynamicum starts with the claim that bodies contain something prior to extension, a force which, as Leibniz emphasizes, is something more than a mere disposition which manifests itself only if the external circumstances are appropriate. The forces placed in bodies by God in creation are instead, says Leibniz, "endowed with *conatus* or *nisus*", their presence leads necessarily to certain outcome if there is no contrary force to thwart this.[19]

---

[18] *Specimen Dynamicum*; AG, p. 125, emphasis added.

[19] AG, p. 118. In a related text (WF, p. 141) Leibniz writes: "This active force is different from a 'faculty' of the Schools, in that a faculty is only a proximate possibility of action, which in itself is dead, so to speak, and inactive unless it is excited by something from outside. But active force involves an 'entelechy', or an activity; it is half-way between a faculty and an action, and contains in itself a certain effort, or *conatus*."

Specimen Dynamicum introduces an all-important crosscutting division of forces: not only can forces be divided into *derivative* and *primitive*, the former usually referring to physical, the latter to metaphysical forces, but also into *active* and *passive* forces. The initial characterization described above, force as something necessarily leading to certain outcomes, seems to capture best the nature of primitive active forces. Active forces are forces by which beings act, passive forces are described as forces "of being acted upon", and thus they seem to require something else which acts upon the thing having some passive force. In *Specimen Dynamicum*, Leibniz introduces the primitive-derivative distinction by dividing active forces into two kinds. On the one hand there are 'primitive active forces' which belong to corporeal substances 'as such'. On the other hand there are 'derivative active forces', which are 'limitations' of the primitive forces. Corporeal substances have primitive active forces because they have substantial forms, or souls.[20] Because of its substantial form, so Leibniz seems to think, every substance has an inner tendency to change in certain ways. In some texts these primitive forces are also described as 'primitive motive forces';[21] they are the ultimate explanation (apart from God) for the fact that there is activity in the created world, the inner principles of movement of the corporeal substances, of which living organisms seem to be the best candidates.[22] The derivative forces are determined as a result of interactions between these living things and their environment. In explaining particular phenomena one should not appeal to primitive active forces, though, but only to the derivative. Later Leibniz describes this by saying that derivative forces are forces "by which bodies actually act on one another or are acted upon by one another".[23]

Next in *Specimen Dynamicum*, Leibniz discusses passive forces which can also be divided into primitive and derivative. Leibniz says that the primitive passive force, which he also describes as the primitive force of resistance, is what the scholastics tried to capture by their term 'primary matter'. Leibniz elaborates as follows:

---

[20] As we have seen, sometimes Leibniz identifies primitive active forces with these substantial forms, but in this text he says only that primitive forces 'correspond' to substantial forms.

[21] E.g. in *On Nature Itself* 11; G IV, p. 511; AG, p. 162.

[22] Often Leibniz endows substantial status only for organisms among the physical things. This view is sometimes described as Leibniz's panorganicism (see e.g. Rutherford, *Leibniz and the Rational Order of Nature*, chapter 8).

[23] AG, p. 120.

> This force is that by virtue of which it happens that a body cannot be penetrated by another body, but presents an obstacle to it, and at the same time is endowed with a certain laziness, so to speak, that is, an opposition to motion, nor, further, does it allow itself to be put into motion without somewhat diminishing the force of the body acting on it.[24]

Impenetrability and inertia themselves are features of material things, and the primitive passive force is described as something in the nature of substances which explains these features. Primitive forces, both active and passive, belong most fundamentally to substances understood as monads. The monadological theory of substance is not, however, the focus in this text. Instead it is enough for Leibniz to talk as if living things were substances, and primitive forces are considered here as the essential active and passive aspects of these living corporeal things. This affects the way in which Leibniz formulates the primitive-derivative distinction in this text: primitive and derivative forces relate to each other somewhat like general and specific features of things, for example, like the property of having mass in general and the property of having a particular mass. This model seems to work rather well in the case of passive powers, but it does not fit very well with what Leibniz elsewhere says about the primitive active forces, which are supposed to be individual; indeed, they are what individuate the substances, and as such cannot be general.

Forces and monads

In the 1680s and 90s, Leibniz's affinities with the Aristotelian tradition were particularly strong. Garber has argued that during this period Leibniz endorsed a rather hylomorphic view of corporeal substances as entities composed of (substantial) form and (ultimately primary) matter.[25] This claim and Leibniz's term of 'corporeal substance' have been the subject of much discussion among his interpreters.[26] As already

[24] AG, p. 120.

[25] "Leibniz and the Foundations of Physics", especially pp. 50–55.

[26] Robert Adams (*Leibniz: Determinist, Theist, Idealist*, p. 331) claims that at the end of his middle period, around the year 1700, "Leibniz had nothing nonmental in mind as a model for conceiving of intrinsic or nonrelational properties of substances". Whether Leibniz had another, more Aristotelian, model in mind earlier, as Garber has argued, is another matter. Adams, however, presents arguments against Garber's interpretation elsewhere in his book.

noted, sometimes Leibniz seems to conceive of substances in a way which comes very close to the Aristotelian view according to which living organisms are best examples of individual substances. But it is not easy to reconcile this kind of view with the view which is generally ascribed to Leibniz and which he himself later explicitly accepts, namely the view that individual substances are monads, simple mental entities having only perceptions and appetites as their inner states. Be the exact nature of these matters, however, as it may, here it suffices to note that during this period Leibniz seems, at any rate, to make a closer connection between substantial form and matter than he later does; most importantly for our purposes, this can be seen in the way he sees materiality connected with substances as the source of passivity in things. In several letters, as Garber brings forward,[27] Leibniz explicitly claims that matter is the passive principle of substances. Consider the following passages:

> However, primitive matter, or matter taken in itself is what we conceive in bodies when we set aside all the principles of unity, that is, it is what is passive, from which arise two qualities: resistance, and tardiness or inertia.[28]

> [T]he mind acts and […] matter is passive, since in every corporeal substance I conceive two primitive powers, that is the entelechy or primitive active power, […] which is, in general terms, the substantial form of the ancients, and then the primary matter or primitive passive power which provides resistance. Thus it is properly the entelechy which acts, and the matter which is passive, but the one without the other is not a complete substance.[29]

In other words, the hylomorphism-echoing doctrine of the middle years offers Leibniz a time-honoured way to account for activity and passivity: the form is the source of activity, matter—whatever its exact ontological status—of passivity. To these correspond two kinds of powers, the aforementioned active and passive powers.

However, as is well known Leibniz moves to a more idealistic position in his so-called mature metaphysics of substance, and this has some important implications for his views on power, activity, and passivity. The outlines of that metaphysics are familiar. The actual world created by God consists of innumerable individual substances, the monads,

---

[27] "Leibniz and the Foundations of Physics", pp. 68–71.

[28] G III, p. 260; AG, p. 289.

[29] G III, pp. 457–458; translation by D. Garber, in "Leibniz and the Foundations of Physics", pp. 70–71.

which are not themselves extended or material but instead mental in their nature, having perceptions and appetites as their inner states. At the same time these substances can be characterized as 'corporeal', for every one of them 'has' a body, because to everything in the perceptions of a monad there corresponds something in the state of its body, and vice versa. One way to put this idea is as follows. Every monad has, as it were, two aspects: from one point of view it is a mental existent in the realm of final causes, from another point of view it is a bodily existent in interactions with the other bodies of the universe.

Perhaps the most notorious feature of Leibniz's metaphysics is the denial of interaction between substances: there is no transeunt causation, i.e. causal occurrences in which two distinct substances are in causal interaction. All activity in Leibniz's universe, at the metaphysical level, is located strictly inside the monads. To act is, according to Leibniz, "the mark of substances",[30] but substances are active in the sense of containing everything required for their states to follow one another in a series. Every substance has its own series of states, a series of perceptions of the universe from some particular point of view, making it a sort of microcosm reflecting all the other substances in the same world. We shall see that Leibniz had positive reasons for this view of substantial forces, reasons which arise from his theory of substances. But he also had negative reasons. Leibniz became very early in his career convinced that it is impossible to give an account of any causal interaction between substances; in his view there is no metaphysically possible way such an interaction could occur. Leibniz rejects as metaphysically impossible the so-called *influxus* theory according to which something in the substance acting as a cause is transferred into the other—the passive—substance. And no other intelligible model for intersubstantial causality is available either, according to Leibniz. Thus all substances are spontaneous with regard to their own states, but completely causally isolated from other substances.

Looking at what can be considered as Leibniz's first mature attempt to develop a metaphysics of individual substances, the famous text of 1686, the *Discourse on Metaphysics*, one may wonder whether Leibniz is successful in giving an account of the intrasubstantial causality either. The explicit aim of this text is to develop a view of created substances which would be able to accommodate both the idea that God is the

[30] *Specimen Dynamicum*; AG, p. 118.

final cause of everything and the view that there is activity in God's creation. The latter part of the project Leibniz considered as essential to his rationalism: without the possibility of ascribing forces to created things all explanation of natural things would be impossible.[31] By developing such an account Leibniz hopes to refute the occasionalist view of Malebranche which, as we have seen, he considers as both metaphysically and theologically inadequate. In paragraph 8 of the *Discourse*, which is titled "To Distinguish the Actions of God from Those of Creatures We Explain the Notion of an Individual Substance",[32] Leibniz introduces the idea that it is characteristic of individual substances to have "a notion so complete that it is sufficient to contain and to allow us to deduce from it all the predicates of the subject to which this notion is attributed".[33] This idea, usually known as the doctrine of complete individual concepts, does not at first sight appear particularly useful in trying to understand the active nature of individual substances. That Alexander the Great, as an individual substance, has a complete concept which (for God who alone can grasp such an infinitely complex concept) gives, as it were, the complete story of what ever happens to Alexander (a complete blueprint used by God in his creation), does not, it seems, entail the claim that Alexander is something which is himself the sole cause of all of his states. Quite the contrary in fact, one might think: if Alexander is just an instantiation of this complete concept, the metaphysical picture seems quite static, God in his creation fixing or determining his creation in every detail. It can be claimed that the solution to this problem lies readily at hand, however. Alexander instantiates his complete concept at every point of his existence, and for Leibniz this means that there is *now* in Alexander something which makes him such that he, say, conquers some city *tomorrow*. To the real in the individual, which corresponds to the complete concept as a whole, Leibniz variously refers not only by the already encountered notions of *substantial form*, *primitive active force*, and *soul*, but also by the notions of *entelecheia* and *law of the series*.

In his later writings Leibniz rarely refers to complete concepts. Instead, he describes substances directly in dynamic terms, as primitive forces which manifest themselves in a series of perceptions constituting

[31] In the *On Nature Itself* 6, Leibniz says that in such a case "anything could equally well be said to follow from anything else" (AG, p. 158).
[32] AG, p. 40.
[33] AG, p. 41.

the life of a monad. There are two aspects in these primitive forces, aspects which are not quite easily combined into a coherent whole. On the one hand, a primitive force of a substance is something which individuates a substance and ensures its identity over changes. So the primitive force is something which is always the same during the existence of a monad. On the other hand, however, this primitive force manifests itself differently at every moment; it is, as Leibniz sometimes says, "what there is in the present state which carries with it a change in the future".[34] Here meet two requirements Leibniz sets for substances: as we have already seen, they must have intrinsic power in order to persist in existence, and they must be endowed with power to act. The latter requirement leads, in the monadological picture, to the view of substances with power to transfer themselves from one perception to another: without a basic (metaphysical) power, there would be nothing capable of realizing the series of perceptions as stated in the concept of a substance.

In Leibniz's mind, there is a close connection between the idea that the inner nature of substances is to be understood by referring to the concept of force and the idea, central to monadology, that substances are mental in character. This can be clearly seen by looking at how Leibniz tries to explain the concept to his puzzled correspondent de Volder.[35] Having learnt that Leibniz considers forces to constitute the inner nature of substances, de Volder wonders how this is possible, basing his question upon the claim that there is something relational in the concept of force. The puzzle could be formulated as follows: how is it possible for the inner nature of a thing to be constituted by something which essentially involves more than one thing? This kind of relationality seems in particular to belong to the derivative forces. In his reply Leibniz says that he thinks it better "to consider derivative forces in relation to the *foundations*, as a figure in relation to extension, that is, as a modification".[36] As we noted above, Leibniz thinks there could not be derivative forces unless there were some primitive force in the substance itself, of which the derivative forces are only 'limitations', somewhat like a particular shape presupposes extension. De Volder's next complaint, then, is that he cannot, with his feeble intellect, understand what are

[34] WF, p. 207.

[35] Here we follow closely Adams's analysis, in *Leibniz: Determinist, Theist, Idealist*, pp. 330f.

[36] G II, p. 27; L, p. 537.

these primitive forces which form the inner core of substances. Leibniz assures that it is not difficult at all to understand what primitive forces are: they are simply the inner states of substances which explain the changes substances undergo. De Volder's difficulty, according to Leibniz, is only that he tries to capture primitive forces by his *imagination*. This cannot be done. Leibniz's further attempt to lead his correspondent in the right direction is located in a passage which Robert Adams describes as "one of the most important in all his works".[37] In this passage, Leibniz explains the intelligibility of primitive force, or what he describes as a 'principle of action', by saying that

> there is something in it analogous to what is in us, namely, perception and appetite. For the nature of things is uniform, and our nature cannot differ infinitely from the other simple substances of which the whole universe consists.[38]

Deep down everything in the universe is active in the same sense that we are active as thinking and desiring beings, that is, as spirits. For Adams, this is an indication that the theory of substances, with their active intrinsic nature, Leibniz is developing, is basically idealistic in character.[39]

Activity and passivity in Leibniz's monadology

We have already noted that during the final decades of the seventeenth century, Leibniz conceived passivity in terms of materiality pertaining to things. But this option is no longer open in the new idealistic framework: nothing material can, of course, be contained in monads. As a consequence, Leibniz has to work out a new way of making sense of passivity. Before starting to analyze the conception of activity and passivity in Leibniz's monadology, we may make a preliminary note. Traditionally activity and especially passivity were conceived as something that pertain first and foremost to transeunt causation. This was not so only for Aristotelian thinkers, but also for such a radical spirit as Spinoza, who contends that "we are acted on [*pati*] when something happens in us, or something follows from our nature, of which we are

---

[37] Adams, *Leibniz: Determinist, Theist, Idealist*, p. 331.
[38] L, p. 537.
[39] Adams, *Leibniz: Determinist, Theist, Idealist*, p. 331.

only a partial cause".[40] To take another classic early modern thinker, Hobbes seems to have only transeunt causation in mind when he discusses activity and passivity: according to him, no action is "said to be possible for the power of the agent alone",[41] which obviously implies that another substance as a patient is always required for the action to take place. This is in consonance with the standard Aristotelian view according to which, roughly put, a suitable patient is needed for the agent to exercise its causal powers; a fire cannot make anything hot if there is nothing able to receive the heat.

In the mature Leibnizian framework things obviously look quite different from this tradition, and he himself openly acknowledges this:

> As I have already said, *anything* which occurs in what is strictly a substance *must be a case of 'action' in the metaphysically rigorous sense of something which occurs in the substance spontaneously, arising out of its own depths*; for no created substance can have an influence upon any other, so that everything comes to a substance from itself (though ultimately from God).[42]

In other words, there is a very real sense in which all substances are exclusively active: they all cause only changes by themselves (i.e. spontaneously) in themselves (i.e. immanently).[43] Where does this leave us with regard to the distinction between activity and passivity? Should it be discarded altogether? No, Leibniz holds, but gives already in the early *Discourse on Metaphysics* indications that it must be conceived in a novel way:

> We could therefore say in some way and properly speaking, *though not in accordance with common usage*, that one particular substance never acts upon another particular substance nor is acted upon by it, if we consider that *what happens to each is solely a consequence of its complete idea or notion alone*, since this idea already contains all its predicates or events and expresses the whole universe. In fact, nothing can happen to us except thoughts and perceptions, and all our future thoughts and perceptions are merely consequences, though contingent, of our preceding thoughts and

---

[40] E3d2; for the method of reference used here, see p. 215, n. 5.

[41] *De Corpore* 2.10; EW I, p. 129.

[42] *New Essays on Human Understanding* 2.21.72, emphases added.

[43] Cf. Spinoza's definition of activity (E3d2): "I say that we act [*agere*] when something happens, in us or outside us, of which we are the adequate cause, i.e. (by d1), when something in us or outside us follows from our nature, which can be clearly and distinctly understood through it alone." On this definition, it is clear that monads can only be active.

> perceptions, in such a way that, if I were capable of considering distinctly everything that happens or appears to me at this time, I could see in it everything that will ever happen or appear to me. This would never fail, and it would happen to me regardless, even if everything outside of me were destroyed, provided there remained only God and me. *But since we attribute what we perceive in a certain way to other things as causes acting on us, we must consider the basis for this judgment and the element of truth there is in it.*[44]

In brief, the challenge is to provide an account of activity and passivity within a philosophical framework which *prima facie* has no room for passivity at all. In what follows, we present Leibniz's response to this challenge.[45] Given the central Leibnizian doctrine that substances are causally isolated entities—each causing effects according to its own concept alone—, we think it is appropriate to say that the task Leibniz must face is one of giving a *non-causal* account of activity and passivity; and at the first blush this seems to be quite a challenging task indeed.

Already in *Discourse on Metaphysics*, Leibniz makes the connection between activity, passivity, and perfection, and this linkage, in itself wholly in line with the tradition, is further elaborated in his later writings. Broadly speaking, Leibniz quite clearly thinks that it is possible and appropriate to talk about activity and passivity in terms of *changes in the level of perfection* in substances. The following passage from the *New Essays* is especially revealing:

> [I]f we take *'action' to be an endeavour towards perfection, and 'passion' to be the opposite*, then genuine substances are active only when their perceptions (for I grant perceptions to all of them) are becoming better developed and more distinct, just as they are passive only when their perceptions are becoming more confused. Consequently, in substances which are capable of pleasure and pain every action is a move towards pleasure, every passion a move towards pain. As for motion: it has only phenomenal reality, because it belongs to matter or mass, which is not strictly speaking a substance. Still, there is a semblance of action in motion, as there is a semblance of substance in mass. From that point of view a body can be said to 'act' when there is spontaneity in its change, and to 'undergo passively' when it is pushed or blocked by another body; just

---

[44] *Discourse on Metaphysics* 14; AG, p. 47, emphases added.

[45] It should be noted that we are here not attempting to find out how, exactly, are substances determined to act in the sense of moving from one state to the next the way they do—for an informative discussion of this, see Rutherford, "Leibniz on Spontaneity"—, we will only be focusing on the way in which Leibniz draws the distinction between activity and passivity.

> as *with the true action or passion of a true substance, we can take to be its 'action', and attribute to the substance itself, any change through which it comes closer to its own perfection; and can take to be its 'passion', and attribute to an outside cause (though not an immediate one), any change in which the reverse happens; because the change can be explained in an intelligible way by reference to the substance itself in the former case and by reference to outer things in the latter*.[46]

We can begin by noting that any change towards perfection is an action of a substance, and any change towards imperfection is a passion.[47] Now, it is far from unprecedented to see a close linkage between activity and perfection, and passivity and imperfection; to cite Spinoza, "[t]he more perfection each thing has, the more it acts and the less it is acted on; and conversely, the more it acts, the more perfect it is".[48] But there is an element in the above quote from the *New Essays* that surely raises questions: Leibniz claims that actions are such that we should attribute them "to the substance itself", whereas passions are such that they must be attributed "to the outside cause". How does this square with the already noted pivotal thesis that *everything* that happens to a substance is a consequence of its *own* notion, an effect of the *intrinsic* causal efficacy of the substance? Once again we encounter the problem that explaining passivity seems to pose to Leibniz.

The key to the solution of this appears to lie in the qualification located in the parenthesis, that the outside cause is "not an immediate one". The *Monadology* contains passages that seem to explicate the way in which Leibniz reasons about this. In section 50, Leibniz contends that a substance can provide *reasons* for what happens in some other substance or substances; and insofar a substance "provides an *a priori* reason for what happens in the other" it is more perfect that the other,[49] and, consistently enough, it can be said to act on the other. This, in turn, enables Leibniz to construct a theory concerning the interdependence of monads that does not violate the tenet that there is no causal influence between substances: influence as reason-giving is ideal, and "can only produce its effect through God's intervention, *when in the ideas of God a monad rightly demands that God take it into account in regulating*

---

[46] *New Essays on Human Understanding* 2.21.72, emphases added.

[47] For more on the connection between activity, passivity, perfection, pleasure, and pain in Leibniz's thought, see Kneale, "Leibniz and Spinoza on Activity", pp. 226–233.

[48] E5p40. For more on activity and perfection, see Roinila, *Leibniz on Rational Decision-Making*, chapter 9.

[49] AG, p. 219.

the others from the beginning of things".[50] In other words, actions and passions have to do with God's original creative activity that results in pre-established harmony. Leibniz elaborates:

> It is in this way that actions and passions among creatures are mutual. For God, comparing two simple substances, *finds in each reasons that require him to adjust the other to it*; and consequently, what is active in some respects is passive from another point of view: *active* insofar as what is known distinctly in one serves to explain what happens in another; and *passive* insofar as the reason for what happens in one is found in what is known distinctly in another.[51]

Moreover,

> This interconnection or accommodation of all created things to each other, and each to all the others, brings it about that each simple substance has relations that express all the others[.][52]

So actions and passions result when God brings it about that substances are 'accommodated' to each other; and through this, although substances cannot influence each other causally, a substance—to be more exact, we should probably say 'the concept of a substance'—can influence other substances. How should this be understood?

Now, one reading that might be seen as quite readily presenting itself of the passages referring to 'regulation', 'accommodation', and 'adjusting'—for instance of the passage that says "in the ideas of God a monad rightly demands that God take it into account in regulating the others from the beginning of things"[53]—is as follows: a concept, say C1, can *demand*, or maybe *force* or *incline*, God to modify another concept, say C2, so that C2 becomes compatible with C1. And so we should say that C1 is more perfect than C2, and conclude that C1 is the agent, C2 the patient.

However, when certain Leibnizian key tenets are taken into consideration, it seems quite obvious that this cannot be what Leibniz has here in mind. Now, we take it to be uncontroversial that he holds that substances are individuated completely internally[54]—and then, given a

---

[50] *Monadology* 51; AG, p. 219, emphasis added.
[51] *Monadology* 52; AG, pp. 219–220, the first emphasis added.
[52] *Monadology* 56; AG, p. 220.
[53] *Monadology* 51; AG, p. 219.
[54] See *New Essays on Human Understanding* 2.27.

certain set of individual substances, certain relations hold.[55] From the viewpoint of the complete concept theory it can be said that "to be a particular individual is to be an instantiation of a particular complete concept",[56] so once a certain complete concept is given, we have a specific individual, and it is hard to see how there could be anything left to be 'adjusted'. In other words, complete concepts are the metaphysical foundation of things,[57] they make things what they are, and no concept can be modified to any degree without changing it to another concept—and hence to another thing. From this it follows that it is impossible to change a concept to any degree, and so it cannot be so that God tinkers as it were with the concepts of substances to come up with the best of all possible worlds.

How then, given this, should the already mentioned passages be understood? We would like to suggest the following reading of *Monadology* 49–56. The talk about 'regulation', 'accommodation', and 'adaptation' is only a metaphorical way of saying that we are dealing with substances composing a *harmonious* world.[58] This would not, then, mean that God would somehow modify some concepts according to others, but only that we should restrict our attention to substances belonging to harmonious wholes. Complete concept of a substance is what it is, it cannot be changed to any degree without changing the substance into another substance; but it can be said that some substances, even though completely internally individuated, are in harmony with regard to their inner states.[59]

However, still in need of further clarification is the passage about "*a priori* reason-giving". Here Leibniz seems to be saying, at the very least, that some substances have what might be called 'conceptual authority' over others; and Leibniz obviously wants to explicate this in terms of clarity and distinctness with which something is conceived through a

---

[55] See Koistinen and Repo, "Compossibility and Being in the Same World in Leibniz's Metaphysics", p. 198.

[56] *Ibid.*, p. 200.

[57] Thus it can be said, "[e]xistence of several substances in the same world is intuitively a purely external denomination, but for Leibniz it must be based upon the inner states of things; without this foundation there could be no such external relation between the things in question" (*ibid.*, pp. 208–209).

[58] Cf. a passage in a reply to Bayle, which elaborates this theme: "[E]verything is regulated and *bound together* in such a way that these natural mechanisms which never go wrong […]" (WF, p. 245, emphasis added).

[59] Here we are following Koistinen and Repo, "Compossibility and Being in the Same World in Leibniz's Metaphysics".

concept: something is "*active* insofar as what is known distinctly in one serves to explain what happens in another; and *passive* insofar as the reason for what happens in one is found in what is known distinctly in another".[60] It should be noted that this goes well together with the fact that, as we saw above, in *New Essays* (2.21) Leibniz explicates perfection and imperfection in terms of distinctness of perceptions.

When the tenets of harmony and conceptual authority are taken together, Leibniz's core idea concerning activity and passivity can be interpreted to be as follows. When we are talking about activity and passivity, there is something—say, a change E—with regard to which two substances'—say, X's and Y's—internal states are in harmony, and because E is more clearly and distinctly understood through one concept, say of X, than through another, say of Y, this means that X is the agent, Y patient. In other words, the authority one concept can have over another consists of the fact that E can be *better understood* or *seen through*, or perhaps one could say *more easily derived from*, the concept of X than Y.[61] To take the famous example,[62] if a man hits a dog, the hitting is better understood through the concept of the man than that of the dog; hence the man is the agent, the dog the patient. Moreover and interestingly, Leibniz seems to think that this basic logico-conceptual architecture of the world appears, at the surface phenomenal level, as the more distinct and developed perceptions had by the man and as the more confused and undeveloped perceptions had by the dog.

We can finish by discussing some topics that, if we have interpreted correctly Leibniz's way of thinking about activity and passivity, may pose problems for him. The example involving the man and the dog contains only two contributing factors, and matters seem relatively clear in that case; but when there are more than two contributing factors—and indeed, there always seem to be, since all monads are interconnected and adapted to each other, each mirroring the whole

---

[60] *Monadology* 52; AG, pp. 219–220.

[61] We owe the expression involving derivation to Peter Myrdal. Martha Kneale ("Leibniz and Spinoza on Activity", p. 232) suggests that in *Monadology* 52 the idea is that when a substance A is active "in an apparent transaction with another substance B", this means the following: "It is for God to have more regard for A than for B in choosing the order of the universe."

[62] A dog is happily eating its meal when a man sneaks up from behind and suddenly hits the dog on the back with a stick; this example was originally put forward by Pierre Bayle in his objections to Leibniz's metaphysics.

universe—the question is, can Leibniz's theory give us a clear-cut and convincing way to classify substances into agents and patients?

One approach might be to say that Leibniz's theory makes activity and passivity matters of degree: any change E can be understood through all the monads, and we can take any two monads and compare the clarity and distinctness with which E can be understood through their concepts, the substance through whose concept E is more adequately represented qualifying as the agent.[63] From this it follows that any event has innumerable agents and patients. However, this is probably something that Leibniz would not be willing to endorse; instead, he might want to say that any E has strictly speaking only one substance that can be called the agent—the one through whose concept E can be most clearly and distinctly (or perfectly) understood—while all the other substances are passive with regard to E; and as far as we can see, this kind of position does not go against anything in his system. But putting things in this way may engender some strange results: to take the dog-hitting example, it would seem to mean that both the dog *and for instance we* are patients of the hitting,[64] and this sounds odd: we would, of course, normally think that only the dog is the patient here.[65] Moreover, it would seem quite plausible to claim that the hitting is more clearly and distinctly understood through the concept of the dog than through our concepts, which would, surprisingly enough, make us *more of a patient* with regard to the hitting than the dog. Further still, Leibniz's theory may have an unwelcome corollary: the close connection between activity and perfection leads quite quickly to the idea that the man doing the hitting, assuming that he is the agent, becomes more perfect by hitting the dog. But there may well be ways in which these complexities and questions can be cleared up.[66]

---

[63] See especially *Monadology* 52; AG, pp. 219–220.

[64] We are grateful to Peter Myrdal for pointing out this problem.

[65] Perhaps, however, this is not so odd: we are, after all, as helpless bystanders passive with regard to the situation. We owe this point to Olli Koistinen.

[66] Donald Rutherford ("Leibniz on Spontaneity", p. 174) presents the following helpful account. When a substance changes according to its own will or desire so that the change is brought about by the substance's "effort to acquire what it represents as goods", it is active and exhibits what Rutherford calls 'agent spontaneity'; when a substance changes so that its states merely represent the physical world irrespective of what "the soul represents as its own volitions", it is passive, although also this change is spontaneous in the sense of being brought about by the substance itself (and thus each substance always exhibits what Rutherford calls monadic spontaneity). The reason why this account makes Leibniz's position seem less strange than the preceding

Conclusion

Our discussion has shown, we hope, that Leibniz had several reasons for giving the concept of force a pride of place in his system: not only is a properly understood notion of force indispensable for workable physics, but force or power is also something we must end up with in metaphysics; only by doing so can we fulfil some proper philosophical requirements, having much in common with those addressed by traditional scholastic thought. In Leibniz's monadology, these basic ideas are incorporated to a basically idealistic metaphysics in which there is only one kind of power: the immanent power substances are endowed with to transfer themselves from one state, or perception, to another. This, in turn, requires that we revise our conception passivity; properly understood passivity, for mature Leibniz, is located where his logico-conceptual considerations meet with his dynamic cast of mind: passivity means that a monad exercises its power so that a perception more confused as the preceding one is brought forward—and this happens, as does activity, according to the conceptual architecture of the world, freely chosen by God and realized by his infinite active power in the beginning of times.[67]

---

discussion may make it appear is that—as Rutherford (*ibid.*) points out—it retains "the commonsense distinction between the soul's activity and passivity: its acting on and being acted on by an external world".

[67] We would like to thank Tomas Ekenberg, Olli Koistinen, Peter Myrdal, Juhani Pietarinen, and Markku Roinila for valuable comments on this chapter.

CHAPTER ELEVEN

KANT ON FORCE AND ACTIVITY

Arto Repo and Hemmo Laiho

Introduction

Preliminary remarks on power

Concepts such as *power* or *force* or *activity* manifest themselves in diverse ways in the philosophy of Immanuel Kant (1724–1804). First of all, they are used in quite different contexts in Kant's writings. Sometimes 'power' refers to the subject's mental or physical capacity to do, or not to do, something (as in *Urteilskraft*, the power of judgment, or *Willkür*, often translated as the power of choice, or *Erkenntniskraft*, the power of cognition). Sometimes 'power' or 'force' refers to something underlying natural phenomena, or something that can be found in nature's workings (as in *Macht der Natur*, the power of nature, or *bewegender Kraft*, moving force, or *vis activa*, active force). Secondly, there are several German terms which all could in a relevant context be translated as 'power' or 'force', such as *Kraft, Macht*, and *Gewalt*, but also as 'ability', 'faculty', or 'capacity', such as *Kraft* and *Vermögen.*

In Kant's works we also find several definitions of power, as the following examples show:

> [T]he principle of change is power [*vis*].[1]
>
> Among the different kinds of unity according to concepts of the understanding belongs the causality of a substance, which is called 'power' [*Kraft*].[2]
>
> The concept of the relation or of the relation of the substance to the existence of accidents, insofar as it contains their grounds, is *power.*[3]

---

[1] *Lectures on Metaphysics*, p. 12 (*Metaphysik Herder*, AA 28:49; unless otherwise indicated, the numbers following Kant's works refer to the volume and page of AA).

[2] *Critique of Pure Reason*, A648/B676.

[3] *Lectures on Metaphysics*, p. 328 (*Metaphysik* L_2, 28:564).

> An internally active power [*Kraft*] in a being is called life[.][4]
>
> Now *means* are all the intermediate causes which the human being *has within his power* [*Gewalt*], whereby to effect a certain intent.[5]
>
> Power [*Macht*] is a capacity [*Vermögen*] that is superior to great obstacles. The same thing is called dominion [*Gewalt*] if it is also superior to the resistance of something that itself possesses power [*Macht*].[6]

However, our aim in this essay is not to give an exposition of different kinds of definitions or of terms denoting or connoting power, or of the possibly very subtle semantic differences between them. Instead, we will be dealing with some philosophical questions arising from Kant's thoughts involving the concept of power and its close relatives.

The questions

The aim of this paper is to take a look at how Kant in his critical and pre-critical writings understands activity and passivity, both in nature and in rational beings. What is it for a thing to be active, to cause changes either in itself or in its environment? How is activity possible among finite substances? Are there fundamentally different kinds of activity in the world? How is it possible that some of the acts of some finite substances are free? It turns out that for Kant, as for many other philosophers discussed in this book, questions about activity, or active forces, are ineliminably tied to questions about passivity, or passive forces. This is true of natural objects which follow blindly deterministic laws of nature, but it is also true of us, rational human beings.

We cannot hope to discuss everything related to these issues. We focus on two themes: first, nature and its forces; second, human beings and their freedom. Our discussion of the first theme begins with Kant's pre-critical views on how finite substances act and interact. We will see how Kant starts by criticizing the Leibnizian view of substances as essentially, but only immanently, active, and ends up with what could be described as the general problem of causality. After that the ideas in the *Critique of Pure Reason* are discussed, mainly Kant's defence of the 'law of causality'. As we will see, by the end of the Transcendental Logic

---

[4] *Lectures on Metaphysics*, p. 295 (*Metaphysik Volckmann*, 28:448).
[5] *Religion within the Boundaries of Mere Reason*, 6:192.
[6] *Critique of the Power of Judgment*, § 28, 5:260.

in the *Critique of Pure Reason* Kant has developed a view of nature in which there seems to be no place for freedom in any strong sense.

After that, the possibility and nature of free activity is discussed. This will involve the Kantian conception of freedom, which also leads us to questions concerning human will and to questions pertaining to morality (morality being, so to speak, the catalyst for the whole issue of freedom). According to Kant, we are not just passive receivers of external stimuli and impulses, which would thereby determine our actions. Instead, we are, or can be, autonomous agents, who have a capacity for free actions. One could say that in human being there is *power* to actively resist or overcome the restraints set by the incentives of the sensible world. The problem is, how is this possible?

Our two themes coincide with Kant's distinction between theoretical and practical reasoning. These can be defined as two frames of mind, or operative realms in which to do philosophy, or just two distinctive explanatory grounds. The first one is tightly connected to the empirical world of phenomena (and to forget this is to be led into metaphysical errors, of which the *Critique of Pure Reason* warns us). The second one, the practical, is not confined to the sensible, having the supersensible, or 'intelligible', as its primary object. In other terms, the theoretical is the realm of *being* (*sein*) (that is, what happens, has happened or will happen, or what observable properties something has), whereas the practical is the realm of *ought* (*sollen*) (that is, what ought to happen or have happened, or what something ought to be like). This distinction is fundamental in Kant's thinking (not to mention its being also a source of several problems in itself), and, as we shall see, it also defines his views on issues pertaining to power.

Substance, interaction, and force

The vis viva *controversy*

Kant's first philosophical work, *Gedanken von der wahren Schätzung der lebendigen Kräfte* (1747), focuses on the notion of force (*Kraft, vis*). Kant asks how should we understand what he calls the essential force of bodies. His discussion is meant to be a contribution to the so-called *vis viva* controversy, which had its origin in Leibniz's critique of Descartes' notion of 'quantity of motion'.

The most pertinent aspect of the *vis viva* controversy was the disagreement about the mathematical formula expressing the force of a moving body. According to Descartes' formula, the quantity of motion or "the power of any given body to act on, or resist the action of, another body" can be identified with the product of its size with its velocity.[7] Leibniz argues that this formula leads in some cases to absurd conclusions; instead, he holds, the force of a moving body should be understood to equal its mass times its velocity squared. Behind this disagreement about physics, Leibniz holds, lie deeper disagreements about the metaphysics of force. The fundamental mistake in the Cartesian physics can be located in the view that the essence of material things is extension. This view, Leibniz claims, leads the Cartesians to the contention that matter is essentially passive. According to Leibniz, although modern philosophers such as Descartes had been in many ways right to criticize the Aristotelian hylomorphic theory of substances, they had gone too far in their rejection of substantial forms. It was in particular the active nature of finite substances which modern philosophers had misunderstood completely. This misunderstanding had led to mistakes in the physical theory, but it had also led to mistakes in metaphysics: when finite substances were denied of force, they necessarily lost their substantiality in the end as well. Thus, Leibniz feared, the logical end of modern philosophy was Spinoza's monism according to which there is only one substance, God or Nature, and everything else is only a mode of this one substance, a necessary consequence of its essence; a view which was an anathema for Leibniz.[8]

By the time Kant was writing his first work, mathematicians Euler and Lagrange had more or less solved the physical aspect of the *vis viva* controversy. To put it simply, it can be said that both Descartes and Leibniz were partially right: they were both onto something important in physics, for both mass times velocity and mass times velocity squared had turned out to be important quantities in the classical mechanics. Though apparently unaware of Euler's or Lagrange's work, also Kant develops a similar view. He thinks, though, that Leibniz is basically right in his criticism of Descartes' view of material substances. Descartes claims that the essence of bodies is extension, whereas Leibniz holds

[7] *Principles of Philosophy*, II.43; CSM I, p. 243.

[8] For more on Leibniz's views on force, see Repo and Viljanen's contribution in this volume.

that we have to assume something more fundamental still, and Kant wholeheartedly agrees:

> Leibniz, for whom the human reason had so much to be thankful for, learned first, that bodies have fundamental power, which belongs to them even before extension.[9]

Kant claims, however, that such rationalist followers of Leibniz as Wolff had incorrectly understood the essential force of bodies as motive force (*vis motrix*). What Kant wants to do is to develop a more abstract notion of force, not conceptually tied to interactions in which moving bodies transfer part of their motion to other bodies. He wants to develop a notion of 'active force' (*vis activa*) of which motive forces are only a special case. What is interesting is that for Kant the most important reason for this kind of generalization of the notion of power seems to be purely philosophical: it helps to eliminate difficulties which early modern philosophers had encountered in trying to understand mind-body interaction. Kant saw the situation more or less like this: if one understands the essential force of bodies as a motive force, then it is clear that a body can act on a soul only by causing the soul to move. But this would require the soul to be material! Thus it becomes impossible to understand how bodies can act on immaterial souls. And it will be as difficult to understand how souls can have an effect on bodies, for the essential force of a soul, apparently, cannot be a motive force, but something completely different. Accordingly, Kant thinks that when we abandon the view of the essential nature of bodies as a *vis motrix*, and take as our basic notion of force a *vis activa*, it becomes possible to understand how interaction between body and mind is possible while retaining dualism. This is because it is basically the same force which dwells both in bodies and in souls.[10]

---

[9] *Gedanken von der wahren Schätzung der lebendigen Kräfte*, 1:17, our translation.

[10] It is interesting to note that at least some remnants of this view can be found even in the *Critique of Pure Reason.* In the chapter on Paralogisms, Kant describes the question concerning "the community of the soul with an organic body" as a dialectical question which arises from the assumption made by transcendental realists that matter as an object of outer sense is in its own inner nature completely different from the nature of the soul (A384–385).

The principle of succession

A New Elucidation of the First Principles of Metaphysical Cognition (1755), commonly known as *Nova Dilucidatio*, is the next interesting pre-critical text with regard to dynamic concepts. In this brilliant work Kant develops an amazing number of ideas, most of which are in one way or another connected with the question of how to understand the active nature of substances. Kant asks how change in general is possible in substances. It is not, however, the term 'force' (*vis*) with which he is now primarily occupied, but instead the term 'ground' (*ratio*). Kant considers the notions of determination and ground with the aim of proving what he calls, following Crucius, "the principle of the determining ground". According to this principle "[n]othing is true without a determining ground".[11]

What does Kant mean by 'ground'? His discussions of this notion are, as are the discussions of the same concept by his contemporaries like Crucius, rather intricate. Right at the beginning of his *Nova Dilucidatio* discussion, Kant introduces a distinction which considerably complicates the content of his notion of ground. This is the distinction between 'antecedently' and 'consequently' determining grounds. The former seems to be the more important kind of ground in the *Nova Dilucidatio*. It is, Kant explains, "the reason why, or the ground of being or becoming". The latter notion, a consequently determining ground, is epistemic: it is "the ground of knowing".[12] At a general level, which covers both kinds of grounds, Kant describes a ground as something which "converts things which are indeterminate into things which are determinate". Following in Leibniz's footsteps, Kant says that any subject-predicate truth requires some appropriate connection between the predicate and the subject. For Leibniz, the proper connection was containment: the subject-concept must in some sense contain the predicate-concept. Kant speaks about "the determination of a predicate in a subject", thus giving the impression that his understanding of truth is less intensional than Leibniz's, in other words, having less to do with

[11] *Nova Dilucidatio*, 1:393.

[12] *Nova Dilucidatio*, 1:392. Kant uses as an illustration the eclipses of the moons of Jupiter. They are, or they give, the consequently determining ground for the fact that light has a definite velocity and does not move instantaneously from one point to another. This was indeed the method used by Ole Römer in 1676. The antecedently determining ground for this same fact would give us an explanation for why light propagates in this manner.

concepts and more with the things concepts refer to. The determining ground is also, Kant says, not only the criterion of truth, but also the source of truth. In some sense, the ground for the fact that S is P is the cause and the explanation why S is P. The ground 'determines' the subject so that P, rather than not-P, applies to it.[13]

Grounds can be internal or external. When something has a property and continues to have it, the ground is something in the thing itself.[14] But when something changes, the ground for the change cannot be solely the changing thing anymore. In Section 3 of the *Nova Dilucidatio*, Kant presents a principle which seems to be directly opposed to Leibniz's view of how the substantial forces operate. The primitive forces of substances, for Leibniz, were intrasubstantial, primarily the foundation for the inner dynamics in the perceptions of individual substances. Substances are active in the following sense: every substance has its own individual essence which is a force responsible for producing the series of states which constitutes the being of the substance in question. There are no real causal interactions between substances, only the pre-established harmony instituted by God between them, guaranteeing that the perceptual states of different substances are not in conflict with each other but present the same world from different perspectives.

Kant, however, rejects the idea of substances as causally independent, claiming instead that there can be no changes in substances "except in so far as they are connected with other substances". This is the content of Kant's *principle of succession*.[15] Without external connections substances would be completely immutable. It is (at least partly) by virtue of its changed relations to other substances that a change occurs in the

---

[13] *Nova Dilucidatio*, 1:392–393.

[14] In *Nova Dilucidatio* (1:410) Kant says that inner determinations are posited in virtue of 'inner grounds'. He also says that a 'ground of truth', in contrast to a 'ground of existence', does not need an antecedently determining ground at all, because of the identity between the predicate and the subject (1:396–397). This is surprising, because elsewhere Kant seems ready to describe the relation between a thing and its properties in dynamic terms. In his *Metaphysik Mrongovius* (29:770), Kant says that "in relation to accidents [a substance] has power insofar as it is the ground of their inherence" (*Lectures on Metaphysics*, p. 178). In 29:823 of the same text Kant also says that "[e]very substance is active insofar as its accidents inhere" (*Lectures on Metaphysics*, p. 181). This is true even in cases in which the state is determined partially from outside: "E.g., a representation of a trumpet sound inheres in me through an external power, but not alone, for had I no power of representation [*vim repraesentativam*], then it could be sounded forever and I could not have a representation" (*ibid.*).

[15] *Nova Dilucidatio*, 1:410.

determinations of a substance. From the Leibnizian point of view, this kind of dependence on other entities is not compatible with substancehood. Thus it seems that Kant is making a radical break with such a strong interpretation of what the independence of substances requires.

One way to describe this shift is to say that whereas for Leibniz force was basically the inner principle of the development of a substance, Kant often understands force as relational. Newton's law of universal gravitation between bodies probably had an impact on Kant's cast of mind: gravitational force is a force between different things.[16] One should notice, however, that Kant is also ready to speak about power in connection with the relation between a substance and its accidents. In general, a change in the determinations of a substance requires a change in its relations to other substances so that some ground, to be found outside the substance itself, can become active. But the particular change this external ground brings about depends upon the nature of the changing substance. Kant's discussion of the principle of succession is quite abstract: the nature of the external connection necessary for change is left open (although Kant says that "motion is the appearance of a changed connection"). He makes it clear, however, that the external connection in itself is not enough for change:

> [E]ven were this simple substance to be included in a connection with other substances, if this relation did not change, no change could occur in it.[17]

Thus, changes in substances require changes in their relations. However, no change is completely determined from outside, for the nature of the affected substance is also relevant in determining the change that happens. A simple example comes from gravitation again: the gravitational force with which some body A affects body B depends upon the masses of both bodies.

Kant gives no less than three demonstrations for the principle of succession (or perhaps the three are just different versions of one and the same demonstration, Kant uses the expression "the same differently"). In all versions he makes use of his earlier discussion concerning the notion of ground. The crucial idea is this: "The inner determinations, which already belong to the substance, are posited in virtue of inner grounds

---

[16] Kant speaks about "Newtonian attraction" later in *Nova Dilucidatio*, when he argues that "the concept of space is constituted by the interconnected actions of substances" (1:415).

[17] *Nova Dilucidatio*, 1:410.

which exclude the opposite."[18] If a substance is determined in some way, if it has, say, a property P, there is something in that substance, a ground, by virtue of which it is P, and this ground does its job, as it were, by excluding the determination not-P. A change would mean that the substance loses P and changes into not-P. But how is this possible if there is the inner ground which excludes not-P? According to Kant, "you must posit another ground". But if the substance is alone, without connection to other substances, where would this other ground come from? Kant takes it to be "patently obvious" that this other ground could only come from outside the substance in question.[19]

It is clear that the principle of sufficient reason, or the principle of determining ground as Kant calls it, plays a role in the demonstrations of the principle of succession. But Leibniz accepted the principle of sufficient reason as well, and still from a Leibnizian point of view the above "demonstration" is anything but obvious. Kant has an interesting comment to make on the reasons why "those who give to the Wolffian philosophy its renown" have gone wrong and maintained that simple substances change in virtue of inner principles of change.[20] They have defined the notion of force in an "arbitrary" way by saying that force "means that which contains the ground *of changes*".[21] One ought instead, according to Kant, to define force as that which "contains the ground of *determinations*". Why is the Wolffian definition (which is essentially the same as Leibniz's definition of primary force) arbitrary? One way to understand Kant's point could be that grounds of determinations seem to be more fundamental than grounds of changes. A substance changes if there is a time t and a property P such that the substance is P before t, and not-P after t. There are grounds for these determinations in the sense that there is something in the substance which explains why it is P before t and not-P after t. But how can something which explains the inherence of P in the substance at the same time explain the inherence of not-P? This does not seem possible, and so Kant concludes that the grounds of determinations cannot play the role of grounds of changes as well. Thus we need to look somewhere else for the explanation of changes.

---

[18] *Ibid.*

[19] Similar argument can be found already in Plato; see Pietarinen's contribution in this volume (p. 20).

[20] *Nova Dilucidatio*, 1:411.

[21] *Ibid.*

The principle of co-existence

Next in *Nova Dilucidatio* Kant moves on to consider another principle, the *principle of co-existence*. We have seen that a connection between substances is a necessary condition for change. Now Kant says something more about how such connection is possible in the first place. According to the principle of co-existence, relations between finite substances require more than the mere existence of these substances. What is required is a "common principle of their existence".[22] Finite substances stand in relation to each other only because they have one and the same ultimate cause, namely God, and because this ultimate cause has "established the relations of things to each other, by conceiving their existences as correlated with each other".[23]

There is something very anti-Leibnizian here as well. Leibniz would agree with Kant that God is needed for there to be co-existence. But in Leibniz's picture, God establishes the relations between created substances simply by establishing their existence. Relations cannot change independently of the internal properties of substances. Kant, however, emphasizes that something more than merely establishing existence of individual substances is required for relations to emerge.

The mystery of causality

It is sometimes said that there was a tendency in the rationalist tradition to confuse causal and logical relations. For Kant it seems to become more and more important to keep them separate.[24] The following illuminating passage is from the *Attempt to Introduce the Concept of Negative Magnitudes into Philosophy*, an essay published in 1763:

> I fully understand how a consequence is posited by a ground in accordance with the rule of identity: analysis of the concepts shows that the consequence is contained in the ground. […] And I can clearly understand the connection of the ground with the consequence, for the consequence is really identical with part of the concept of the ground. And, in virtue of the fact that the consequence is already contained in the ground, it

---

[22] *Nova Dilucidatio*, 1:413.
[23] *Ibid.*
[24] One rather early text in which the distinction between logical and real grounds appears is *The Only Possible Argument in Support of a Demonstration of the Existence of God* (1762) where the idea of God as the real ground of all possibility is the central theme.

> is posited by the ground, in accordance with the rule of agreement. But what I should dearly like to have distinctly explained to me, however, is how one thing issues from another thing, though not by means of the law of identity. The first kind of ground I call the logical ground, for the relation of the ground to its consequence can be understood logically. […] The second kind of ground, however, I call the real ground, for this relation belongs, presumably, to my true concepts, but the manner of the relation can in no wise be judged.[25]

In this passage, which may already display some Humean influences, Kant's growing disagreement with the Leibnizian tradition obtains a clear expression. Kant begins the essay by drawing the distinction between two kinds of opposition. Two things are 'logically opposed' if there is a contradiction in the idea that they both exist. Opposition is 'real' if no contradiction is involved. Many examples of real opposition which Kant gives come from physics. A body may be subject to two motive forces in opposite directions, the result of which is rest. Another case is the one where the motion of one body is 'cancelled' by another in a collision. This cancellation is based upon what Kant takes to be fundamental to all matter, its impenetrability, in other words the fact that matter "fills" space.

Logic, or analysis of concepts, cannot help us to understand real opposition, or teach us which things are real grounds to which things.[26] How can we have knowledge of real grounds, then? According to Kant it is experience that teaches us this. But experience cannot teach us *why* something is a real ground for something else, only that this is in fact the case. In another text Kant is more explicit about this:

> [A]lthough the resistance which something exercises in the space which it occupies is thus [through experience] *recognised*, to be sure, it is not for that reason *understood*. For, like everything else which operates in opposition to an activity, this resistance is a true force. […] Now, every rational being will readily admit that the human understanding has reached its limit here.[27]

---

[25] *Attempt to Introduce the Concept of Negative Magnitudes into Philosophy*, 2:202.

[26] In *The Only Possible Argument* Kant also considers two bodies that can have 'motive forces' in opposite directions, and as a result these motive forces can annihilate each other. Now Kant says: "From this it is also apparent that real opposition is something quite different from logical opposition or contradiction, for the result of the latter is absolutely impossible" (2:86). In the case of a real ground, logic is not sufficient to determine the consequent.

[27] *Dreams of a Spirit-Seer Elucidated by Dreams of Metaphysics*, 2:322.

Enter the Critique of Pure Reason

Towards the end of his pre-critical period Kant clearly faces the following dilemma. On the one hand, he thinks that the world is constituted by active entities. He has rejected the Leibnizian pre-established harmony, a view in which substances were conceived as active only with regard to their own states. Instead he prefers a metaphysic which is more in line with Newton's physics: substances which interact with each other, and only by virtue of this interaction constitute a single world. But on the other hand, Kant thinks that Hume had really discovered something profoundly important in passages like this one:

> All events seem entirely loose and separate. One event follows another, but we can never observe any tie between them. They seem *conjoined*, but never *connected*.[28]

Hume ended up with a projectivist account of causality. It may be the case that there are constant conjunctions between event-types, but that is all one can find in the things between which causal relations are thought to obtain. When we say that one thing causes another we imply that there really is a force between them, that the one produces the other. But this is only our projection, a projection explained by the fact that after we have experienced the conjunction often enough, an association between the ideas of those things has been established in our minds.

It is important to notice that the Humean view of causality involves more than just scepticism about the reality of the causal relation. The whole model of what a causal relation involves is changed from the roots: a strongly metaphysical model of causation that invokes the causal powers of substances and their ability to alter their own properties and other substances through this power is rejected and replaced by a weaker model of causation that invokes only event-event relations. However, it is possible to raise the sceptical question between the causal relata also in a model in which substances as active agents play the central role. In fact, it could be argued that this was just what Kant did in some of the pre-critical texts considered above.

In the *Critique of Pure Reason*, Kant wants to give an answer to Hume. That answer cannot be head-on, however. He cannot insist that after

---

[28] *An Enquiry concerning Human Understanding*, Section VII, "Of the Idea of Necessary Connexion".

all we are able to discover the necessary connections between things, either by reason or by experience. He cannot do this because he thinks that Hume was in some sense basically right.[29] How, then, is Kant going to defend a view in which real interaction plays a fundamental role? The notion of force does not play any significant part in the *Critique of Pure Reason*, but there are nevertheless some interesting passages. Kant clearly takes the concept of force to be an *a priori* concept. In one passage he says that "force is something which understanding thinks in a representation of a body" (B30). Force is something which remains in our representation of a body even after we separate everything which sensation gives us, for example impenetrability, hardness, and colour. In the Table of Categories, Kant gives what he describes as "the true root concepts of pure understanding" (A81/B107). Besides these root concepts there are also derivative concepts, "equally pure", called 'predicables'. The concept of force is among these. From the category of causality one can derive the predicables of force, action, and undergoing.

If Kant succeeds in the Transcendental Deduction to show that there can be no experience without the application of the categories, then he has also given us reason to believe that concepts like force and action must have a role in our conception of the empirical world. Because the considerations in the Deduction have nothing directly to do with our themes, we are not going to discuss them. Instead we can take a look at some later parts of the first *Critique* where Kant develops his views of causality further.

In what he calls the Analogies of Experience Kant discusses some *a priori* principles involving the categories of substance, cause and effect, and interaction. The precise relation of the discussion to the earlier parts of the *Critique* is a matter of still ongoing debate, but all three analogies have something to do with the way in which a manifold of perceptions is transformed into a unified experience. The principle common to all analogies is, as it is formulated in the second edition, this: "Experience is possible only through the representation of a necessary connection

[29] In the *Prolegomena*, Kant writes that we can understand that Hume was right in claiming that, in Kant's words, "we in no way have insight through reason into the possibility of causality, i.e., the possibility of relating the existence of one thing to the existence of some other thing that would necessarily be posited through the first one" (*Prolegomena to Any Future Metaphysics That Will Be Able to Come Forward as Science*, § 27, 4:311).

of perceptions" (A176/B218). We have seen that Kant earlier wondered about the necessary connection: how can distinct things be necessarily connected so that the occurrence of one necessitates the occurrence of the other? It is clear that Kant has not rejected the idea that in some sense causality involves necessity. His way of showing how this is possible is now transcendental: events in nature are causally connected by virtue of the fact that such a connection is a necessary condition of experience.

The First Analogy involves the category of substance; according to it, the 'quantum' of substance remains the same in all changes of appearances. Kant says that change can be perceived only in substances (A188/B321). Thus the metaphysical underpinnings of Kant's theory of change seem to be similar to those of the pre-critical writings: substance-accident ontology. The Second Analogy concerns causality and Kant formulates it like this: "All alterations occur in accordance with the law of the connection of cause and effect" (A189/B232). Kant's proof of the Second Analogy is closely connected with answering the following question: how is it possible to represent a succession of states of an object? Kant argues that the fact that there is what he calls the subjective sequence of apprehension is an insufficient base for the representation of an objective sequence of appearances. Representations may occur in us in a certain temporal order. But the temporal order of the events in the external objects does not correspond to the subjective temporal order of experiences in any simple way. If I walk around a house, I receive a series of experiences of the different determinations of the house, but though my experiences come one after another, I do not think that the corresponding determinations of the house follow one another in the same manner. In some other case, for instance when I see a ship floating down the river, the subjective order corresponds to succeeding positions of the ship (A1982/B237). Why so in this case, if not in the first? Kant says that "the former [the subjective sequence] proves nothing about the connection of the manifold in the object, because it is entirely arbitrary" (A193/B238).

If Kant is right in the Second Analogy, the empirical world with objective processes in which objects change their states is necessarily a causal world with necessary law-abiding connections between different events. This does not mean that Hume's point about the presence of causal powers in the world is not correct. Kant admits that much when he says that "temporal sequence is accordingly the only empiri-

cal criterion of the effect in relation to the causality of the cause that precedes it" (A203/B249). He also makes essentially the same point about our causal knowledge he made in the later pre-critical texts considered above, namely that it is not possible to have *a priori* causal knowledge: "Now how in general anything can be altered, how it is possible that upon a state in one point of time an opposite one could follow in the next—of these we have *a priori* not the least concept" (A207/B252). Towards the end of the Second Analogy, Kant turns once again to discuss a very Leibnizian theme, the connection between the concept of substance and the concept of action. In the First Analogy Kant had proved the connection between substance and permanence. The Second Analogy establishes the connection between substance and activity: "This causality leads to the concept of action, this to the concept of force, and thereby to the concept of substance" (A203/B249). Kant raises a question concerning the relation of these two crucial features of substances, namely their permanence—the feature he emphasizes in the First Analogy—and their active nature.

The Second Analogy is basically the claim that every change in the universe is a causal process. The Third Analogy concerns not changes directly but the things that change, substances. Kant's formulation of the Third Analogy is this: "All substances, insofar as they can be perceived in space as simultaneous, are in thoroughgoing interaction" (A222/B257). Kant, once again, seems to have had in mind the Newtonian view that all bodies exert gravitational force on all other bodies. That the principle is *a priori* comes as a bit of a surprise, given that until Newton, the prevailing view in the new physics was that substances act only on those with which they are in immediate contact. Leibniz, of course, had claimed that substances do not interact at all, and Kant is here once again distinguishing himself from that view. But in this regard Kant's discussion is not as far from some Leibnizian themes as one might first think. A common theme is the question concerning the unity of the world. What makes it the case that substances, in some sense independent from each other in their being, belong to the same world? For Leibniz, the universal harmony established by God constitutes the fact that substances belong to the same world. In his proof of the Third Analogy, Kant argues that without interaction, we would be unable to determine whether objects exist simultaneously, given that time cannot be perceived. As Henry Allison puts it, "the basic claim is that thoroughgoing interaction is the condition under

which distinct substances can be experienced as coexisting in a common spatiotemporal world".[30]

Activity, freedom, and the human subject

Our superiority over nature

In his earliest work, Kant saw the question of active forces to be fundamentally connected with the mind-body problem. Of all the intertwining philosophical problems Kant's biggest concern, however, would eventually come to be the relation of morality with other issues concerning the world and the place of human subject in it. The main problem is that we seem to arrive at a very deterministic world view, one which is not easily made compatible with human freedom. This is a serious problem because, at least according to Kant, world without freedom leaves no room for morality. Already in his pre-critical work, Kant thought that if there were no freedom, our moral concerns would be meaningless, our claims about right and wrong nonsensical.[31]

Later on Kant is very strict on this, freedom being "absolutely required for everything moral".[32] Already from this we could conclude that there must be freedom, but is it only that we would like to think so because such a conclusion presumably seems more acceptable, or simply nicer, than strict determinism? Are we not, as the argument goes, causally determined just like everything else in nature? How can it be that each and every event is conditioned by another event, but our actions, or at least some of them, are not? How can we speak of moral responsibility if freedom is not ensured?

It is a widely accepted idea that morality requires freedom, and it is also one of the key thoughts in Kant's philosophical system. Indeed, Kant was a thinker not willing to deny the existence of morality. Rather, morality plays the ultimate role in making us human beings. Freedom, of course, does not follow straightaway from the need to presuppose morality, but the latter sets a motive for establishing freedom and gives us reasons to look further into the matter. So, granted that morality implies freedom, what evidence, on the other hand, we have of moral-

[30] Allison, *Kant's Transcendental Idealism*, p. 261.
[31] See e.g. *Lectures on Metaphysics*, pp. 81–82 (*Metaphysik* L_1, 28:269).
[32] *Religion within the Boundaries of Mere Reason*, 6:190.

ity? As Kant puts it, we are aware of *moral law*, which "absolutely commands us, and by virtue of the existence of this law we can infer the freedom of our actions".[33]

Should we not be suspicious of such an inference? Maybe, but Kant has a point here. Despite being the sensuous creatures we are, we are also rational creatures by our very nature. Our thinking is not guided only by what we sense and perceive in the world. For example, even though we will never meet a perfectly virtuous human being, we can think what qualities such a person would have. Knowing this, we can set a standard for our own conduct and try to get as close to it as possible.[34] In other words, we can put such an ideal into regulative use, and we do seem to recognize something like this taking place in us and in the behaviour of other people.

Not only are we "at least acquainted with the (moral) laws of freedom",[35] but we can also raise ourselves above nature, regard ourselves as independent of it:

> [T]he irresistibility of [nature's] power [*Macht*] certainly makes us, considered as natural beings, recognize our physical powerlessness [*Ohnmacht*], but at the same time it reveals a capacity for judging ourselves as independent of and a superiority [*Überlegenheit*] over nature on which is grounded a self-preservation of quite another kind than that which can be threatened and endangered by nature outside us, whereby the humanity in our person remains undemeaned even though the human being must submit to that dominion [*Gewalt*].[36]

This capacity has direct moral connotations. Just as we can regard ourselves as not utterly dominated by nature, it is within our power to put our interests and pragmatic ends aside, and give room to "our highest [i.e., moral] principles".[37] This also indicates, as the quote above suggests, that humanity is not about natural self-preservation, but rather about rising above such a thing.[38] The clearest example of this would be an unselfish moral action.

---

[33] *Lectures on Metaphysics*, p. 490 (*Metaphysik Vigilantius*, 29:1022).
[34] See the *Critique of Pure Reason*, A569–570/B597–598.
[35] *Religion within the Boundaries of Mere Reason*, 6:191.
[36] *Critique of the Power of Judgment*, § 28, 5:261–262. The context here is Kant's theory of the sublime.
[37] *Critique of the Power of Judgment*, 5:262.
[38] Cf. *Religion within the Boundaries of Mere Reason*, 6:26. See also *The Metaphysics of Morals*, 6:392, where humanity is distinguished from animality by the human capacity to set oneself ends.

Even though moral value is the primary value in Kant's thinking, there are also other important values which support the moral one and seem to give it, so to speak, empirical meaningfulness (in addition to good deeds and so on, of course). For example, acting according to moral law, which for Kant is strictly a rational law, is valued by Kant also because it is sublime.[39] This is at least the case when one is not only "*subject* to moral law" but "at the same time *lawgiving* with respect to it and only for that reason subordinated to it".[40]

Kant takes beauty to be another human cultural value, which, *via* the feeling that is part of experiencing it, "greatly promotes morality".[41] When contemplating a beautiful object, Kant thinks, we value the given object for itself without any aim of profiting from it.[42] The fact that we act disinterestedly towards it in that situation then at least suggests a possibility for putting our personal interests aside in other situations, too.[43] Eventually this points to the capacity for acting freely, not just going after whatever our arbitrary interests make us desire.

Nonetheless, on these matters experience does not secure much. We cannot explain the moral law empirically by showing what happens in the world, because it is what we *ought to do* that counts.[44] Then again,

---

[39] See the *Critique of the Practical Reason*, 5:117. Here it may be appropriate to point out that the fact that Kant is against moral feeling theorists such as Epicurus or Shaftesbury (see e.g. the so-called *Inaugural Dissertation*, 2:396) does not mean that he is against such feelings *per se* but against making those, instead of rational reasoning, the very foundation of morality. So, for Kant, however much we may have empirical evidence for moral feelings or some such, it is not enough to found a philosophical account of morality.

[40] *Groundwork of the Metaphysics of Morals*, 4:440.

[41] *The Metaphysics of Morals*, 6:443.

[42] E.g. *Critique of the Power of Judgment*, § 2, 5:204.

[43] Kant writes in the remark on § 29 (5:267) of the *Critique of the Power of Judgment*: "The beautiful prepares us to love something, even nature, without interest; the sublime, to esteem it, even contrary to our (sensible) interest." Paul Guyer, who quotes the passage in Guyer and Allison, "Dialogue: Paul Guyer and Henry Allison on Allison's *Kant's Theory of Taste*", p. 125, takes this to mean "that the experience of the beautiful teaches us that it is possible for us to act disinterestedly, that is, out of disinterested motivation, while the experience of the sublime reminds us that we must often overcome sensible interests or inclinations in order to do this, but also to suggest that the experiences of the beautiful and the sublime actually prepare us to act morally by strengthening dispositions to feeling that are, as Kant says in the *Metaphysics of Morals*, 'serviceable to morality in one's relations with other people'". Henry Allison writes in the same article (p. 134) that "the experience of beauty has an important propaedeutic function, helping us to break with our sensuous interests and thereby providing a kind of bridge to morality". See also Allison, *Kant's Theory of Freedom*, pp. 167–168.

[44] E.g. *Critique of Pure Reason*, A318–319/B375.

we do acknowledge this 'ought', which, in turn, makes the causal necessity of our actions suspect. According to Kant, the latter is not only so because of our moral concerns, but also explanatorily, as hinted, for example, in this pre-critical passage:

> But the necessity of nature alone cannot be the explanatory ground of everything; the first ground of origination must happen through freedom, because nothing but freedom can furnish a ground of origination, of which more is said in the Rational Theology.[45]

Yet, the doctrine Kant calls rational theology leads us to speculations about the idea of God, which are not necessarily helpful here. As Kant says elsewhere: "I will explain natural appearances as though they came from the constitution of nature; I cannot call on God. For that would mean putting aside all philosophizing."[46] Nevertheless, God can be either useful or indeed a necessary idea from the *practical* point of view, and the very same applies to the idea of freedom as well. Moreover, we must take the question out of empirical context altogether.

The human being as noumenon

It was shown above that for Kant the concern about morality acts as the most important motivation for solving the problem of freedom (the latter being a direct follow-up to the questions pertaining to causality which is for the 'critical' Kant the category that contains such concepts as force and activity). The questions about freedom and morality seem to be thoroughly intertwined, as the lack of one seems to mean the lack of the other. Kant has already given us plenty of insights supporting both human freedom and human morality, but the problem remains: human freedom could still be said to be only an assumption. But is it, for Kant, only that? His 1770s lectures on metaphysics display Kant's 'empiricist' tendencies on the matter:

> A human being thus *feels* a faculty [*Vermögen*] in himself for not allowing himself to be compelled to do something by anything in the world. Often because of other grounds this is indeed difficult; but it is still possible, he still *has the power* [*Kraft*] *for it*.[47]

---

[45] *Lectures on Metaphysics*, p. 24 (*Metaphysik L_1*, 28:200).
[46] *Lectures on Metaphysics*, p. 130 (*Metaphysik Mrongovius*, 29:774).
[47] *Lectures on Metaphysics*, p. 70 (*Metaphysik L_1*, 28:255, emphases ours).

The quote suggests that the human power of acting freely is not to be seen just as a practical assumption, but also as something we are somehow conscious of, even though not necessarily immediately.[48]

In some places Kant does not seem to approach freedom as a problem at all, but rather takes many things more or less for granted:

> *Practical freedom can be proved through experience.* For it is not merely that which stimulates the senses, i.e., immediately affects them, that determines human choice, but we have a capacity [*Vermögen*] to overcome impressions on our sensory faculty of desire by representations of that which is useful or injurious even in a more remote way; but these considerations about that which in regard to our whole condition is desirable, i.e., good and useful, depend on reason. Hence this also yields laws that are imperatives, i.e., objective laws of freedom, and that say what ought to happen, even though perhaps it never does happen, and that are thereby distinguished from laws of nature, which deal only with that which does happen, on which account the former are also called practical imperatives.[49]

On the other hand, what is *not* known by us is

> whether in these [free] actions, through which it prescribes laws, reason is not itself determined by further influences, and whether that which with respect to sensory impulses is called freedom might not in turn with regard to higher and more remote efficient causes be nature[.][50]

Here Kant thinks as if he was our contemporary. It could be so that we just do not know enough to settle the question about freedom. If we were to have access to all possible information, maybe then the so-called practical freedom, together with all our actions and omissions, would be shown to be as necessitated as anything that happens in the world.

Then again, it should be emphasized that after the passage quoted above Kant adds that we should not concern us with such a possibility

---

[48] E.g. in the *Lectures on Metaphysics*, p. 264 (*Metaphysik Mrongovius*, 29:897) and in the *Critique of Practical Reason* (5:29–30) Kant denies that we are immediately conscious of freedom. It is rather the consciousness of the moral law that reveals freedom, as already suggested above (more of this later on).

[49] *Critique of Pure Reason*, A802/B830, emphasis ours. Cf. *Opus postumum*, 22:53: "The possibility of freedom cannot be directly proved, but only indirectly, through the possibility of the categorical imperative of duty, which requires no incentives of nature."

[50] *Critique of Pure Reason*, A803/B831. See also A549–550/B577–578 and *Lectures on Metaphysics*, p. 264 (*Metaphysik Mrongovius*, 29:897), where Kant speaks of the possibility of 'secret stimulus' working in us.

"in the practical sphere". Practically speaking, we nonetheless decide whether to do this or that, if anything, and at least to this extent the reducibility of freedom to causal mechanisms is "merely speculative question, which we can set aside as long as our aim is directed to action or omission".[51] What else are these decisions and doings and refrainings but everyday facts of life, and as such empirically known by us?

So, the genuine philosophical problem seems to be what Kant calls *transcendental* freedom.[52] In the first *Critique* Kant defines it as "an absolute causal spontaneity [*Spontaneität*] beginning from itself a series of appearances"[53] and as "a faculty [*Vermögen*] of absolutely beginning a state, and hence also a series of its consequences".[54] Later, when speaking of it as "freedom in the cosmological sense" and emphasizing it to be "transcendental idea of freedom" Kant defines it as

> the faculty [*Vermögen*] of beginning a state from itself, the causality of which does not in turn stand under another cause determining it in time in accordance with the law of nature.[55]

This sets us a tricky problem in two ways: as a general philosophical question of the possibility and explicability of freedom, and as a more specific question concerning Kant's way of conceiving the human subject.

The general philosophical question would then be whether we can make nature and freedom compatible. If we take determinism to mean simply that every event has a cause, we can easily arrive at a compatibilist solution.[56] For example, if I now decide to go out of my room, I am the cause of that event. Being free means just that I can have an effect on a causal series in this sense and to this extent. But let us suppose that we want to know exactly what happens in the given situation.

---

[51] *Critique of Pure Reason*, A803/B831.

[52] At the time of the *Critique of Practical Reason* (see e.g. 5:97), Kant holds that transcendental freedom is the necessary grounding condition for morality. Securing transcendental freedom would then be the basis for Kant's moral philosophy, so the stakes are high. Kant's earlier view is different, e.g. in the *Lectures on Metaphysics*, p. 80 (*Metaphysik* L_1, 28:267): "Practical or psychological freedom was the independence of the power of choice from the necessitation of stimuli. This is treated in empirical psychology, and this concept of freedom was also sufficient enough for morality."

[53] *Critique of Pure Reason*, A446/B474.

[54] *Critique of Pure Reason*, A445/B473.

[55] *Critique of Pure Reason*, A533/B561.

[56] Cf. *Lectures on Metaphysics*, p. 489 (*Metaphysik Vigilantius*, 29:1021), where Kant makes a distinction between determinism and predeterminism.

There we have certain limitations stemming from the fact that if we want to explain what happens, we must deal with appearances, or empirical phenomena. When examining the causal chain, we cannot arrive at any freestanding first cause, for example, my decision to leave the room, because there is always a further cause lurking around the corner. That is, theoretically speaking, we cannot prove the supposed freedom of my action just as we cannot prove the existence of the first mover, or God.

Maybe it indeed was I as an autonomous agent who began a new series of consequences, assuming that I in fact left the room, but it is equally possible that my action was just a compulsory reaction to various sensuous incentives having an impact on me. Maybe I was, to use Kant's phrase, only being "controlled by the strings of nature".[57] Whatever explanation we try and propose, the empirical fact remains: all we really had before us were appearances of various causes and effects preceding and following each other in time. From this we could conclude just as Kant did:

> Thus in regard to this empirical character there is no freedom, and according to this character we can consider the human being solely by observing, and, as happens in anthropology, by trying to investigate the moving causes of his actions physiologically.[58]

What is really important here, however, is that for Kant this does not imply an absolute denial of freedom. As Allison points out, the claim that for any action there is always an empirical-causal explanation does not preclude freedom.[59]

As rational beings we can reason what we *ought to do*, and it could very well be so that to fulfil my duties I ought to stay in my room until I have finished the task given to me. Even if I went out right away when I noticed the bright blue sky, I can still reason quite clearly that I *ought not to have acted* that way. The 'ought' here refers to the rule-generating property of our reason, that is, to our ability to set for ourselves principles and control our actions according to them. 'What happens?' is an empirical question, and in the current example we can answer it by referring to the empirical fact of this one person leaving

---

[57] *Critique of Pure Reason*, A463/B491.
[58] *Critique of Pure Reason*, A550/B578.
[59] Allison, *Kant's Theory of Freedom*, p. 42. Similarly, Allison emphasizes the importance of distinguishing the question of explanation from that of imputation.

the room (preceded and accompanied by many other empirical facts, such as what happened in the person's brain and so on). Now, 'What ought to happen?' is not an empirical question at all, Kant thinks. To answer it, we must acknowledge certain non-empirically given grounds for action. Someone could say, very much in Kantian spirit, that I should have acted out of duty and not have left the room before my task was done (assuming the task was not unreasonable or impossible to accomplish). Someone else could say, very much in anti-Kantian spirit, that I did the right thing by following my more natural urge to postpone the task. Either way, what is set before me is a rule, or principle, by which to act, reminding us that "the realm in which *principles* […] have power is not one of nature but of freedom".[60]

Hence, the principles that regulate action make explicit the *human* causal powers (and it happens to be so that morality is the domain where these principles are put into their most pure use):

> Now that this reason has causality, or that we can at least represent something of the sort in it, is clear from the imperatives that we propose as rules to our powers of execution [*Kräften als Regeln*] in everything practical. The ought expresses a species of necessity and a connection with grounds which does not occur anywhere else in the whole of nature.[61]

Broadly put, reason determines the will (*Wille*) via principles, and the will has the power (*Willkür*) to begin a course of action according to these principles.[62] At least we can explain freedom in this way. Furthermore, as transcendental freedom is, after all, an idea, it lacks by definition any explanation given on phenomenal grounds. It is indeed intelligible and conceivable, but not empirically demonstratable in a definite fashion (as it lacks, in more Kantian terms, an object of intuition). Still, an idea may be necessary. We cannot, so to speak, nullify freedom. Rather, our reason must think of it.[63] Whatever can or

---

[60] *Religion within the Boundaries of Mere Reason*, 6:82.

[61] *Critique of Pure Reason*, A547/B575.

[62] To be more precise, there are two kinds of principles, objective and subjective. Kant calls the latter 'maxims'. These are the principles by which we actually act, be they good or bad. An objective principle is a law on which we should base our actions regardless of any other principles that we may have set ourselves. Ultimately, it would be the universal moral law overriding subject's inclination-based or other non-moral willings. (See e.g. *Groundwork of the Metaphysics of Morals*, 4:400–401; 4:420–421; *Critique of Practical Reason*, 5:20.)

[63] One could also speak of a need of reason. In the *Critique of Practical Reason* (5:5), Kant speaks of "a *need having the force of law*, to assume something without which that cannot happen which one *ought* to set unfailingly as the aim of one's conduct".

cannot be said of freedom in a theoretically fitting manner, we cannot rid ourselves of the possibility of freedom (when regarded as an idea). Kant puts much weight on our limits as knowing subjects: we lack theoretical knowledge of transcendental freedom but we also lack absolute grounds of claiming that there is *not* such a thing.[64]

According to Kant, human reason has a natural interest to seek unity and coherence.[65] Interestingly for our purposes, he uses the concept of power as an example of this. As we are confronted with all kinds of powers or forces in nature, we try and subordinate these powers, which at first seem to manifest themselves in very diverse and unconnected ways, under one fundamental power. That is, we systematize our perceptions according to certain maxims of thought, such as 'seek the greatest unity and interconnection among things' (this formulation being ours not Kant's). The important thing here is, however, that as we can only recognize powers by observing the workings of nature, and despite our successful effort to reduce various derivative powers to more primitive ones, the ultimate cause of this or that power will remain hidden from us.[66] Moreover, we cannot know for sure whether we have found any absolutely fundamental power, towards which our reason nonetheless strives.[67] Similarly, our reason strives after absolute freedom, or absolute spontaneity, and the first cause independent of any prior cause. For Kant, it almost seems irrelevant that reason cannot achieve its goal on theoretical grounds. Thus the question must be taken to the non-empirical or noumenal realm, which also poses the most obvious problem for Kant's account of freedom. How to *positively* argue for freedom on such grounds? What is the talk about the special kind of causality of freedom, or of reason, really about?

As already suggested in the passage of the *Critique of Pure Reason* quoted above (p. 271; A533/B561), Kant claims transcendental freedom to be an atemporal, that is, a self-determining power or faculty, "causality

---

[64] This is already evident in Kant's thought in 1770s, e.g. in the *Lectures on Metaphysics*, p. 82 (*Metaphysik L_1*, 28:270).

[65] *Critique of Pure Reason*, A648–651/B676–679. The context here is Kant's analysis of the regulative use of the ideas of reason.

[66] See *Lectures on Metaphysics*, 328 (*Metaphysik L_2*, 28:564). This applies to physics as well as to psychology (or as he calls it, "physics of spirits").

[67] *Critique of Pure Reason*, A649–651/B677–679. Regarding some power as fundamental follows rather from the presupposition of the "systematic unity of nature".

of which does not in turn stand under another cause determining it in time in accordance with the law of nature". Elsewhere Kant also speaks of the will

> that does not draw its determining, and indeed adequate, grounds (intellectual) from states and conditions of the previous time but, rather, performs the action by self-determination (spontaneity) and without being necessitated by any cause of the previous time.[68]

We can quite easily *think* of a cause that is not being determined or necessitated by what happened before if it is permitted to put the cause in question outside the confines of time so to speak. The question remains, though, would that be an explanation of a capacity for free *action*? Then again, Kant sees reason as the ultimate human power. It is also, metaphorically speaking, the supreme court that decides where to set the limits of our understanding. As Kant writes in the *Groundwork of the Metaphysics of Morals*:

> [Reason] proves its highest occupation in distinguishing the world of sense and the world of understanding from each other and thereby marking out limits for the understanding itself.
>
> Because of this a rational being must regard himself as *intelligence* (hence not from the side of his lower powers) as belonging not to the world of sense but to the world of understanding; hence he has two standpoints from which he can regard himself and cognize laws for the use of his powers and consequently for all his actions[.][69]

Emphasizing a previously made point, we just cannot consider our "own kind" of causality, or spontaneity, but "under the idea of freedom".[70]

Furthermore, in his later writings Kant insists that the causality of freedom, even though not compatible with the causality of nature from the theoretical standpoint, is nonetheless a *fact*:

> But what is quite remarkable, there is even one idea of reason (which is in itself incapable of any presentation in intuition, thus incapable of theoretical proof of its possibility) among the facts, and that is the idea of freedom, the reality of which, as a particular kind of causality (the concept of which would be excessive from a theoretical point of view) can be established through practical laws of pure reason, and in accordance

[68] *Lectures on Metaphysics*, p. 487 (*Metaphysik Vigilantius*, 29:1019).
[69] *Groundwork of the Metaphysics of Morals*, 4:452.
[70] *Ibid.*

> with these, in real actions, and thus in experience.—It is the only one among all the ideas of pure reason whose object is a fact and which must be counted among the *scibilia* [things that can be known].[71]

Before this passage Kant first defines facts as "objects for concepts the objective reality of which can be proved", and then as "things, or their properties, which can be established by means of experience (one's own experience or the experience of others, by means of testimony)". At first glance it may seem that these definitions turn the *idea* of freedom into a very peculiar kind of fact, but in addition to 'extending' the concept, Kant seems to, above all, point to the application of practical laws, which is something experientially realizable. This, taken together with the following passage from the second *Critique*, also reveals the link to morality once again:

> I ask instead from what our *cognition* of the unconditionally practical *starts*, whether from freedom or from the practical law. It cannot start from freedom, for we can neither be immediately conscious of this, since the first concept of it is negative, nor can we conclude to it from experience, since experience lets us cognize only the law of appearances and hence the mechanism of nature, the direct opposite of freedom. It is therefore the *moral law*, of which we become immediately conscious (as soon as we draw up maxims of the will for ourselves), that *first* offers itself to us and, inasmuch as reason presents it as a determining ground not to be outweighed by any sensible conditions and indeed quite independent of them, leads directly to the concept of freedom.[72]

Such rational laws, in turn, "are also something that properly belongs to a human being as noumenon, and constitutes the character of the latter".[73] This makes sense, because they are something not empirically given to us, and also something we have despite of whatever it is that is empirically given to us. But how we are to explain this, is beyond our abilities: "In short, we cannot explain what is working in us."[74] On the other hand, this holds equally of explaining freedom and of explaining nature in its innermost workings, as the active power in itself remains incomprehensible in both realms. Keeping this important point in

---

[71] *Critique of the Power of Judgment*, § 91, 5:468.
[72] *Critique of Practical Reason*, 5:29–30. Cf. *Lectures on Metaphysics*, p. 491 (*Metaphysik Vigilantius*, 29:1023).
[73] *Lectures on Metaphysics*, p. 491 (*Metaphysik Vigilantius*, 29:1023), emphasis removed.
[74] *Ibid.*

mind the challenge is not to remain on the freedom-side of the issue, but rather on both sides.[75]

The plain answer would then be that we have two standpoints which allow two kinds of causalities not contradicting one another.[76] Not only are they logically compatible, but self-standing on their own. It is noteworthy that Kant is strictly an incompatibilist when it comes to explaining theoretically the phenomenal realm of appearances. But it is equally noteworthy that Kant seems to argue all along that we are not in a position to give absolute priority to such a stance. In fact, Kant recognizes the insistence on the incompatibility between nature and freedom as based on "the common but deceptive presupposition of the absolute reality of appearance".[77] In Kant's thinking such a presupposition would ultimately be based on the false identification of appearances with the things in themselves. The coexistence of nature and freedom is further supported by the special role of transcendental freedom in the antinomies of pure reason in the first *Critique*.[78] The outcome of the Third Conflict of the Transcendental Ideas, that is, the conflict between the affirmation of freedom (thesis) and its denial (antithesis), is, as Allison has put it, that both are dogmatic in their own way.[79]

As should be clear by now, Kant has no simple and straightforward argument for human freedom. There are two main reasons for this. First, Kant developed and fine-tuned his view for decades. Second, to have a deep understanding of Kant's arguments one needs to examine his philosophical project thoroughly and as a whole (which is something beyond the scope of this paper). Still, an unkind interpreter could say that Kant does not argue *for* freedom but rather gives too much force

---

[75] Here one could consider such sources as *Lectures on Metaphysics*, p. 82 (*Metaphysik* L_1, 28:270), *Critique of Pure Reason*, A318–319/B375, *Critique of the Power of Judgment*, § 76, 5:403, and the *Critique of Practical Reason*, 5:121, spanning almost twenty years of Kant's thinking.

[76] One could of course protest, as many have done, that to explain free action it is not a legitimate move to separate sensible from supersensible—or empirical from intelligible—as two somewhat independent points of view. Eventually this leads to questioning Kant's whole critical system, also known as transcendental idealism. We will not, for obvious reasons, follow such a lead here.

[77] *Critique of Pure Reason*, A536/B564.

[78] For Kant, the idea of freedom is, compared to the ideas of God and immortality, special also in the sense made explicit in the following passage: "But among all the ideas of speculative reason freedom is the only the possibility of which we *know* a priori, though without having insight into it, because it is the condition of the moral law, which we do know" (*Critique of Practical Reason*, 5:4).

[79] Allison, *Kant's Theory of Freedom*, p. 23.

on presuppositions. In one sense this is also the outcome of our analysis, namely that Kant rather argues for the limits of what can be positively and plausibly said of such matters as the freedom of our actions. Then, if the answers seem insufficient, the reason for that is not so much Kant's argumentation but the subject matter itself. At any rate, here we find ourselves close to the heart of Kant's critical project.

Epilogue: human being as originator

On the basis of Kant's general picture of agency, we can make the following distinctions. On the one hand, we have internally determined free actions, which are based on the intellect's own motives. From these can arise spontaneous actions, controlled by the will. In Kant's own words: "Whoever is determined by motives is free, for he acts according to the laws of his own reason according to spontaneity and not according to receptivity."[80] When someone acts 'according to spontaneity', reason has the active and determining role. Reason is thus the source of the human causality of freedom and the lawlike imperatives according to which the subject acts or refuses to act, and this cannot be explained exclusively by the causality of nature.

On the other hand, we have externally determined antecedently necessitated actions. All human beings, including those who act freely, have desires and impulses, but those who just react according to them in a non-spontaneous way are passive, that is, act 'according to receptivity'. Here nature takes the active role. Any such situation can be explained by the causality of nature, and the laws pertaining to it.

It seems plausible enough that actions are either antecedently necessitated or autonomous (that is, not determined by antecedent natural causes but by the human will). Only in the latter case the human being can be seen as having active power, being thus an originator of actions, not just a puppet acting according to the causal influence of external forces. But, as already hinted, no person is completely outside external influence, and in that sense no human action should be regarded as purely self-determined. As Kant writes,

[80] *Lectures on Metaphysics*, p. 378 (*Metaphysik Dohna*, 28:677).

> stimuli will and must not be excluded from the human power of choice, for otherwise it would be a pure power of choice, a pure self-dependent being, which can determine itself only according to the laws, not against them.[81]

At the level of genuine actions, "highest freedom of all", "utterly independent of all stimuli" would thus be no human freedom (yet we do possess the idea, which we can put into regulative use).[82] What thus seems to matter in free human agency taking place in real life situations is subject's capacity to control, or act against, external influence. Again, a couple of Kant's definitions are in order: "Freedom in the practical sense is the independence of the power of choice from necessitation by impulses of sensibility."[83] In other words, it is based on "a faculty of determining oneself from oneself, independently of necessitation by sensible impulses".[84] According to Kant, this faculty, or power, also separates human beings from mere animals: both human and animal power of choice are sensible, that is, pathologically affected, but only the latter is pathologically necessitated.[85]

Then, if one can suppress sensible impulses, being thereby not necessitated by them, one is free. This is possible because of what Kant calls *arbitrium liberum* (free choice).[86] But it seems to follow from the above that in actual cases our actions are only 'comparatively' (relatively) free. Consider the following pre-critical view:

> One can be forced by sensuality to act contrary to the intellect, but one can also be forced by the intellect to act contrary to sensuality. The more a human being has power [*Kraft*], by means of the higher [intellectual] power of choice [*Willkür*], to suppress the lower [sensitive] power of choice, the freer he is. But the less he can compel sensuality by the intellect, the less freedom he has. If one compels oneself according to rules

---

[81] *Lectures on Metaphysics*, p. 485 (*Metaphysik Vigilantius*, 29:1016).

[82] The quotations are from the *Lectures on Metaphysics*, p. 71 (*Metaphysik* L_1, 28:256).

[83] *Critique of Pure Reason*, A534/B562. Cf. *The Metaphysics of Morals*, 6:226.

[84] *Critique of Pure Reason*, A534/B562. Still, as Allison (*Kant's Theory of Freedom*, p. 39) writes, "even desire-based or, as Kant later termed it, 'heteronomous' action involves the self-determination of the subject, and, therefore, a 'moment' of spontaneity".

[85] *Critique of Pure Reason*, A534/B562. Human beings, in contrast to animals, are also "beings whose causality is teleological, i.e., aimed at ends" (*Critique of the Power of Judgment*, § 84, 5:435).

[86] E.g. *Critique of Pure Reason*, A802/B830.

> of morality, and the lower power of choice is suppressed by the higher power of choice, then that is *virtue*.[87]

We could say, of course, that if one acts according to the moral law, which holds universally, one is free from the 'necessitation by impulses' in the fullest possible sense. We could also speak of our power of choice as pure in the sense of being "determined merely by the representation of law".[88] On the other hand, can we ever be absolutely certain whether we really base our actions on such a law?[89] Could it not be so that we are being motivated by something else but we just do not know it? What we would also like to have, if we are to be called absolutely free agents, is the possibility to knowingly act against any such law, even if it is not a good thing.[90]

But we can here leave aside the problems of interpreting Kant's account of morality and its many details. If we focus, instead, on issues encountered in Kant's theoretical philosophy, as scrutinized above, we find some interesting similarities. Just like external connection, without which substances are left immutable, is needed for any change to occur, there would be no action whatsoever without external forces interacting with the human agent. That an agent is only relatively free does not then need to imply that she would not really be free. Rather, without some kind of interconnection, the human subject would be neither active nor passive: he or she would be no more determining than determined.

---

[87] *Lectures on Metaphysics*, p. 71 (*Metaphysik L_1*, 28:256–257). Cf. *Nova Dilucidatio*, 1:402, where Kant suggests that we are free only if we act according to the representation of the good, and the better we succeed in this, the freer we are.

[88] *Lectures on Metaphysics*, pp. 378–379 (*Metaphysik Dohna*, 28:677). Here morality is once again the ultimate basis: without it such a pure power of choice would be "absurd". Cf. *The Metaphysics of Morals*, 6:213: "Human choice, however, is a choice that can indeed be *affected* but not *determined* by impulses, and is therefore of itself (apart from an acquired proficiency of reason) not pure but can still be determined to actions by pure will."

[89] Cf. *Critique of Practical Reason*, 5:47: "[T]he moral law is given, as it were, as a fact of pure reason of which we are a priori conscious and which is apodictically certain, though it be granted that no example of exact observance of it can be found in experience."

[90] Cf. *Critique of the Power of Judgment*, § 5, 5:210: "For where the moral law speaks there is, objectively, no longer any free choice with regard to what is to be done[.]" This could be taken to imply that subjectively speaking, there is still room for free choice. We could choose to act on a not-so-good maxim, regardless of the moral law. We should prefer the latter, but even if we act contrary to it, we would still remain free agents (albeit far removed from virtuous ones).

We are subjects whose essence involves being under the influence of external forces. But we are essentially active with regard to the external world as well, and it is not only in his discussions on freedom where Kant emphasizes this. The idea of active subjects can be found in the centre of the theoretical philosophy of the first *Critique* as well. In the beginning of the so-called B-deduction, Kant makes a foundational claim that what we receive through the senses is a manifold which is not, as given, a unified whole, but only a plurality. This plurality can begin to have the form of a world only through an act of combination. And this combination is an "act of spontaneity", or an "act of subject's self-activity".[91] Thus it is not only freedom but cognition—the world as an object—which requires the capacity to act as an originator.

[91] *Critique of Pure Reason*, B129–130.

CHAPTER TWELVE

DIFFERENCES THAT ARE NONE. HEGEL'S THEORY OF FORCE IN THE *PHENOMENOLOGY OF SPIRIT*

Andreas Schmidt

Introduction

The chapter on "Force and the Understanding" occupies an outstanding place in Georg Wilhelm Friedrich Hegel's (1770–1831) *Phenomenology of Spirit*. It is here that we find both the culmination and the ultimate undermining of those theories that Hegel discusses under the heading of "Consciousness": realist or idealist positions of classical metaphysics that consider the opposition of subject and object as simply given and develop their views on being and knowledge within this framework. Among these views, the theory that takes as central the notion of a supersensible 'force' that produces the sensible world by necessity represents the point of transition: the climax of what classical metaphysics is able to accomplish and at the same time the moment of its ultimate destruction, which paves the way for Hegel's own theory that understands itself as a post-metaphysical theory. A correct reading of this chapter is therefore of vital importance for understanding Hegel's project of overcoming metaphysics.

In the first section I will give a brief outline of the chapter "Perception", which immediately precedes the chapter "Force and the Understanding", in order to first make clear which problem the notion of force is supposed to solve, and second, because the chapter on 'Force' and 'Understanding' results in a circular movement that refers back to the preceding stage of the *Phenomenology*—or so I want to argue. In the second section I will offer a closer examination of Hegel's theory of force and argue that Hegel is here dealing with a Spinozistic position according to which the sensible world can be explained as the necessary manifestation of a supersensible force—a position, however, that ultimately fails on empiricist grounds. In the concluding third section I address the question of whether the 'infinite force of the Concept'

with which Hegel's *Science of Logic* ends could be of any help to the criticised position. It will turn out that although in Hegel's ultimate view of things the notion of 'force' does play a central role, it will be transformed into something that will not be part of objective reality any more—not even a supersensible part of it.

Perception and the problem of unity and multiplicity

In the "Introduction", Hegel sets out the method he intends to pursue in the *Phenomenology of Spirit*. The starting point is Hegel's criticism of all contemporary epistemology that claims to be without presuppositions but is in fact based on dualistic premises—a fact that gives rise to representationalism and finally to scepticism. Hegel makes the opposite claim: belief and the objective world must not be separated in a dualistic way, but are supposed to be ultimately one and the same.

But how can Hegel justify his claim against the sceptic? He thinks the only possible way of doing so is through 'immanent criticism', i.e. by challenging the competing theories, using their own standards. An immanent criticism attempts to show that a given theory is self-contradictory. But theories do not have their contradictions written on their face, since if they did, they would not count as serious candidates for true theories. So it is necessary to distinguish between what is explicit and what is implicit in a theory, between what is said and what is tacitly presupposed. The task of an immanent criticism is to make explicit the implicit presuppositions and to show that they are in contradiction with what is explicitly said. In addition to that, Hegel contends that the competing theories subjected to criticism can be arranged in such a way that the successor theory avoids the contradictions of its predecessor but itself falls into new contradictions; the new theory is thereby the 'determinate negation' of its predecessor: its *negation*, because it recognizes the predecessor theory as false and replaces it; its *determinate* negation, because it does not simply reject the predecessor theory but learns from its errors and tries to avoid them (with the least possible adjustment).[1] The end point will be reached when we either arrive at

[1] *Phenomenology of Spirit*, section 79; M, p. 51. Unless otherwise indicated, the references to 'sections' are to those of the *Phenomenology of Spirit*.

a theory devoid of any contradiction or we reach a contradiction that cannot be solved by any successor theory.[2]

Hegel uses expressions like 'Sense Certainty', 'Perception', and 'Understanding' as names of such theories—theories about knowledge in which sense certainty, perception, and understanding respectively play a central role. He personifies them by having them advance claims and change their minds in the presence of criticism until they are finally defeated.[3]

Understanding is the theory or "pattern of consciousness" (section 87; M, p. 56) that is supposed to solve an internal contradiction that plagues Perception. So let us first take a brief look at Perception. Whereas Sense Certainty is unable to accept as real anything but absolutely simple objects that are immediately given to the senses without any essential relation to something absent, Perception avoids this error and accepts from the outset complex objects instantiating a multiplicity of properties. These perceptual objects have the basic characteristic of 'unity' on the one hand and 'multiplicity' on the other: an object is numerically one but instantiates a multiplicity of properties (that are themselves multiply instantiable). This basic structure is now beyond dispute; and this is why Perception has made some progress compared to Sense Certainty. But Perception has a specific theory about the meaning of 'unity' and 'multiplicity', and therein lies the problem. Perception conceives (or misconceives) unity as simplicity and thereby lands in a contradiction because simplicity and multiplicity are contradictory. It is impossible

[2] In the last section of the "Introduction", another aspect is brought into play. Hegel contends that the different theories that are criticized in the course of the *Phenomenology of Spirit* compose "the entire realm of the truth of Spirit" (section 89; M, p. 56), i.e. the theories dealt with are not only arbitrary products of intellectual fantasy but rather based on different moments in the nature of Spirit, i.e. on different aspects of our knowledge of the world. In this respect the *Phenomenology of Spirit* is a successive self-illumination of Spirit, revealing its fundamental structure. What is implicit in Spirit will be explicated step by step, until Spirit will have at the end become completely transparent to itself. Thus the criticized positions are preserved, because they are constitutive parts of Spirit, their falsity consisting only in the fact that they were taken as true in isolation. If, e.g., Sense Certainty (see below) assumes that knowledge in the proper sense is nothing but direct acquaintance with the world without any conceptual mediation, it is mistaken; such knowledge does not exist. But the *concept* of immediacy does exist; it plays an important role in the conceptual space in which the mind operates. In this respect the patterns of consciousness that are criticized are not something that should be discarded completely but material that we have to keep and collect in order to build the system of knowledge.

[3] Concerning this personification see Koch, "Hegel über Indexikalität und sinnliche Gewißheit", p. 67.

to say of one and the same thing both that it is absolutely simple and that it consists of a multiplicity of things. There are three versions of the position of Perception, which are criticised one after another.

First version. Perception first takes up a realist stance. The theory of Perception describes the mode of being of the object and it does so in the contradictory way just outlined: The object "is a universal *common medium* in which many properties are present as sensuous *universalities* […]. But this being so, what I perceive as the simple and the True is also not a universal medium" (section 117; M, p. 71). The object of Perception is both a multiplicity of co-instantiated properties (or their 'common medium') and something absolutely simple. So one would have to accept contradictions in reality, a consequence Perception is not ready to allow.

Second version. Here the perceiver is no longer completely passive but accepts the responsibility of one side of the contradictory pair. There are two sides, and consequently two variants of this second version. The first variant consists in saying that simplicity appertains to the object, whereas the multiplicity of properties comes into play by the perceiving subject. The object *is* simple, but it *seems* to consist of a multiplicity of properties that are in fact something merely subjective. Hegel may have Locke in mind here, who writes in *An Essay concerning Human Understanding* that the idea "to which we give the general name substance" is "nothing, but the supposed, but unknown support of those qualities, we find existing", a support that is unknown because it is "*something* besides" the qualities it has.[4]

However, the minimal condition for a viable notion of object is that an object is constituted in such a way that there can be numerically distinct objects. If we remove all properties from an object to retain nothing but a simple bare particular, then it is no longer possible to talk of numerically distinct objects, since—at least according to Leibniz's Law—they are numerically distinct only by virtue of their different properties: "[T]he thing is a One precisely by being opposed to others. But it is not as a One that it excludes others from itself, for to be a One is the universal relating of self to self, and the fact that it is a One rather makes it like all the others; it is through its *determinateness* that the thing excludes others" (section 120; M, pp. 72f.). So this variant turns

[4] Locke, *An Essay concerning Human Understanding*, Book II, chapter 23, §§ 2 and 3.

out not to be very successful. The second variant consists in reversing this position by attributing simplicity to the perceiving subject and multiplicity to the object. The object only *seems* to be simple but is in fact nothing but a multiplicity of properties: "In other words, the Thing is the *Also*, or the *universal medium* in which the many properties subsist apart from one another, without touching or cancelling one another; and when so taken, the Thing is perceived as what is true" (section 120; M, p. 73). This position has some affinity to Hume's notion of substance, for Hume writes: "We have […] no idea of substance, distinct from that of a collection of particular qualities, nor have we any other meaning when we either talk or reason concerning it."[5] Hegel does not see it difficult to refute this position through immanent criticism. It seems clear to him that the minimal conditions for a viable notion of object are not satisfied if the (so-called) object only consists in a multiplicity of properties without any unity.

Third version. Both moments, simplicity and multiplicity, are located again in the object as they were at the beginning; the object *itself* is in one sense simple and in another sense a multiplicity; but these two aspects are now differentiated with respect to the essential and the inessential. Multiplicity is necessarily part of the notion of an object, but only as something inessential, whereas simplicity appertains to the object essentially. This is, however, nothing but a verbal manoeuvre. If the multiplicity is inessential, it can be cancelled, and so this version fails for the same reason as did the conception of the object as a bare particular:

> The object is defined as having within it an essential property which constitutes its simple being-for-self; but along with this simple nature the object is also to contain diversity which, though *necessary*, is not to constitute its *essential* determinateness. This, however, is a distinction that is still only nominal; the unessential, which is none the less supposed to be necessary, cancels itself out.[6]

We should expect that the next stage in the development of the *Phenomenology* will offer a solution to the problem of the One and the Many that so obstinately resists the theoretical efforts of Perception.

---

[5] Hume, *A Treatise of Human Nature*, Book I, section VI, p. 16.
[6] *Phenomenology of Spirit*, section 127; M, p. 76.

Force and Understanding

So finally we arrive at the third pattern of consciousness—Understanding—which Hegel examines in the chapter entitled "Force and the Understanding: Appearance and the Supersensible World". This pattern of consciousness seems best characterised by its belief in the truth of the principle of sufficient reason. Understanding applies this principle to the sensible given as its *explanandum* and posits a supersensible ground as its *explanans*. This supersensible ground is Understanding's object. Since the supersensible ground ought to be a *sufficient* explanans for the sensible given, the latter has to follow from the former by necessity. To further elucidate the nature of this supersensible ground of the sensible given, Hegel makes use of the term 'force' (section 136; M, p. 81). A force is a disposition or a capacity that inheres in an object. Dispositions come in two varieties: active and passive. In the first case we attribute to the object the capacity to cause something (water is able to dissolve sugar, fire is capable of burning wood). In the latter case we attribute to the object the capacity to be the bearer of a caused effect (glass is fragile, wood is combustible). A force is an active disposition: the disposition to cause something. Active dispositions typically are actualized only if suitable conditions are given: fire actualizes its power to burn wood only if the piece of wood is sufficiently close, not too wet, etc. Hegel calls the actualization of a disposition its 'expression' (*Äußerung*) (*ibid.*) and the triggering conditions the 'soliciting' factor (*das Sollizitierende*) (section 137; M, p. 83).

As already indicated, Hegel applies the notion of force to the supersensible ground, while the sensible given is its 'expression'. Of course, the concept of force has to be modified in order to fit this purpose. Since the metaphysical force—contrary to empirical forces—is actualized with absolute necessity, it requires no extraneous soliciting.[7] And if

[7] In sections 137–139 Hegel provides an elaborate discussion of the paradoxical situation that results if one tries to explain the supersensible ground from which everything is supposed to emanate necessarily by means of the notion of a force whose actualization requires an extraneous solicitation. Obviously such a manifestation would no longer be necessary (section 137) and, being extraneous, the soliciting factor itself would lack any explanation, which would result in explanatory circles or regresses (sections 138 and 139). It turns out that in the context of describing the supersensible ground, the distinction between a 'solicited' and a 'soliciting' factor is nothing but an illusory element due to the constraints of representation (section 141). The forces with which we are acquainted in our everyday experience are of course always dependent on

the metaphysical force does not have to wait for an extraneous soliciting, it always already is actualized: we might say that the metaphysical force can be separated from its actualization no more than the triangle can be separated from the sum of its internal angles adding up to 180 degrees.

So Hegel's concept of metaphysical force is basically a Spinozistic one. Spinoza not only draws the same necessitarian conclusions from the principle of sufficient reason as does Understanding in Hegel's *Phenomenology*, he also identifies the necessity by which everything follows from God's essence with the power of God, i.e. with his causal efficacy. As Spinoza says: "God's power is his essence itself."[8] By this he does not simply want to say that it belongs to the nature of God to have power, but rather that the nature of God itself is causally efficacious and therefore is identical with God's power. This is made clear by the following comment of Spinoza on the proposition in question: "God's power is nothing except God's active essence."[9] It was Herder who translated this 'potentia' of God by the term 'force' (*Kraft*) and made it the centre of focus in his interpretation of Spinoza:

> This hits the centre of Spinoza's system: for him power is essence; all of its attributes and modifications are for Spinoza actual and effective activities that are manifestly displayed. In the spiritual world it is thought, in the world of bodies it is movement; I do not know which noun could cover both as easily as the term 'force' [*Kraft*], 'power', 'organ', from which every activity in the bodily and spiritual world has its origin.[10]

Of course there are several differences between Spinoza's and Hegel's (or rather: Understanding's) conceptions of the metaphysical power. Most notably, Hegel carefully avoids talking of a *substance* from the nature of which all of its modes follow, because the notion of a substance possessing a plurality of modes had already turned out to be

---

an extraneous soliciting, but the metaphysical force appertaining to the supersensible ground has to be conceived without that kind of factor.

[8] E1p34; for the method of reference, see p. 215, n. 5. For more on this, see Viljanen's contribution on Spinoza in this volume.

[9] E2p3s.

[10] Herder, "Gott. Einige Gespräche über Spinoza's System nebst Shaftesbury's Naturhymnus", p. 452, my translation. In his *Encyclopedia*, Hegel talks of "the confusion of conceiving God as Force, a confusion from which Herder's God especially suffers" (*The Logic of Hegel*, p. 247 [§ 136]). According to Hegel, the confusion consists in the fact that the notion of force cannot be completely detached from the notion of something external by which it is 'solicited', as it should be when applied to God. In the *Phenomenology*, however, Hegel seems to be ready to admit such a detachment.

contradictory in the Perception chapter. So the metaphysical force must not be conceived as a property of something; rather, it is a *pure* force, a free-standing disposition without any bearer in which it inheres.

So I do not want to suggest that Hegel deals specifically with Spinoza in the chapter "Force and the Understanding". What is at issue is rather the implicit world view that underlies modern scientific thinking in general. This scientific world view has ultimately Spinozistic consequences—or so I want to argue. It leads to the idea of a metaphysical force from which everything follows by necessity, whether the scientist is conscious of this consequence or not.

But is this new notion of metaphysical force of any use in solving the problem that worried Perception—the problem of the unity of the one and the many? Hegel thinks it is: unity pertains to the force *qua* disposition; plurality pertains to the force *qua* actualization. The reason for this is (presumably) that dispositions are *directed* toward their (possibly various) expressions. In this sense dispositions possess a kind of physical intentionality.[11] Intentional objects do not introduce real multiplicity into the bearer of the intentional state—in this case into the metaphysical force itself. Only if the disposition is actualized does a real multiplicity of sensible phenomena arise. But as we have seen, for Hegel the metaphysical force manifests itself *necessarily*; it always already *is* manifest and it has no unrealized possibilities. So the same sensible world is both a multiplicity of perceptible phenomena and an object of the physical intentionality of one simple force. The crucial progress compared to the Perception chapter lies therefore in the fact that in the notion of force, as Hegel conceives it, both are inseparable. Unity and plurality are two sides of one and the same coin; force is necessarily always already actualized, just as, for Spinoza, *natura naturans* and *natura naturata* are two aspects of the same substance.[12] Force *is* the sought-after unity of unity and plurality. The problem that troubled Perception is thus solved. But of course this new pattern of consciousness has problems of its own, as will be presently shown.

So far the position held by Understanding has been described from the point of view of the philosopher, who has a much better grasp of the motives and consequences of this position than Understanding itself. In the subsequent parts of the chapter Hegel goes on to describe the *experiences* Understanding itself makes concerning its own position, i.e.

---

[11] See Molnar, *Powers: A Study in Metaphysics*, pp. 60–81.
[12] E1p29s.

he shows the process by which Understanding comes to acknowledge the shortcomings of its initial formulation and tries to amend it. In the course of these experiences Understanding makes three attempts to develop a theory of a supersensible ground that could explain the sensible world.

First version. Initially Understanding does not make use of the notion of force. Instead it identifies the supersensible ground of the sensible world with the laws of nature. "[T]he *supersensible* world is an inert *realm of laws* which, though beyond the perceived world—for this exhibits law only through incessant change—is equally *present* in it and is its direct tranquil image" (section 149; M, pp. 90f.). However, this first attempt to grasp the relation between the supersensible ground and the sensible world quickly collapses under Hegel's criticism. He offers *three* objections. His *first* criticism points to the fact that a law of nature has the form of a conditional: If p, then q. *Given* that p, we can infer that q. But the inference is not possible on the basis of the conditional alone. The logical form of the law leaves open whether its antecedent conditions are met and permit a valid inference to be drawn. It does not help to try to derive the truth of the antecedent by means of *another* law, because this would only push the problem one step further and give rise to an infinite explanatory regress. So the realm of law cannot exhaustively explain the realm of appearances. For this reason the first attempt to identify the supersensible ground of the sensible world does not succeed in giving a complete explanation of the realm of appearances.

Hegel's *second* criticism is based on the fact that there is a plurality of laws of nature, and that this plurality is itself in need of an explanation: "[T]his plurality is itself rather a defect; for it contradicts the principle of the Understanding for which, as consciousness of the simple inner world, the True is the implicitly universal *unity*" (section 150; M, p. 91). If, however, we do succeed in reducing this plurality of laws to a simple law, another problem arises that Hegel (*ibid*.) describes as follows:

> [W]hen the laws thus coincide, they lose their specific character. The law becomes more and more superficial, and as a result what is found is, in fact, not the unity of *these specific* laws, but a law which leaves out their specific character; just as the *one* law which combines in itself the laws of falling terrestrial bodies and of the motions of the heavenly bodies, in fact expresses neither law.[13]

[13] See also *Encyclopedia* II § 286, Add. (in *Hegel's Philosophy of Nature* II, p. 43): "The attempt is made to put everything on the same level. Everything can of course

The problem Hegel is referring to is the following. He sees it necessary to make a distinction between layers of reality which have different categorical properties. If Understanding tries to apply the laws of a lower realm to a higher one, it levels out the different categorical properties of these layers. Not that this application would be impossible—Hegel does not deny the validity of Newton's law of universal gravitation—, but there would be a (philosophical) loss in the understanding of reality, if this reduction were not only a *methodological* device but presented itself as a discovery concerning the *ontological* make-up of reality.[14] And since Understanding wants to *identify* the supersensible ground with the realm of the laws of nature, conceiving the laws of nature in a purely instrumental way is not a viable alternative; for Understanding, the reduction of the plurality of laws to a single encompassing law is inevitably bound to ontological reductionism. Therefore, the attempt to interpret the supersensible ground of the sensible world as a single unifying law does not succeed in *adequately* explaining the sensible world in its categorical diversity. (One might add that even if the single encompassing law could serve to explain the plurality of the specific laws, it would still remain contingent *itself* and therefore be in need of explanation.)

Hegel's *third* criticism consists in calling into question whether laws of nature can actually have an explanatory role. This objection is based on a distinction between a Humean and a non-Humean conception of laws of nature. According to the Humean view, laws of nature have a purely descriptive role: they codify regular sequences of event types. But if the laws of nature are understood in this way they do not explain anything at all.[15] This may be easily clarified by a simple example. Let us assume I find out that each time I put a sugar cube in a glass of water, it dissolves after a short time. Given the additional premise 'Now I put this sugar cube into this glass of water', I can validly infer 'This sugar cube will dissolve after a short time'. But in doing so, have I *explained* why this sugar cube dissolves? Obviously not. The situation is different,

---

be treated from a chemical point of view, but everything can also be treated from a mechanical point of view, or as electricity. When bodies are treated at one stage, this does not exhaust the nature of other bodies however, as for example when vegetable or animal bodies are treated chemically."

[14] See Posch, "Hegel's Anti-Reductionism".

[15] For Hume's role in the chapter 'Force and the Understanding', see also Hyppolite, *Genèse et structure de la Phénoménologie de l'Esprit de Hegel*, pp. 126f.

however, when I replace the first premise by a sentence like 'Water has the power (or force) to dissolve sugar cubes'. In this case we have an explanation—admittedly a rather poor and uninteresting one, but an explanation nonetheless. The point is that the new premise rules out that the correlation of both events is a pure coincidence; rather it states it to be *necessary*. But if we regard laws of nature as a manifestation of modal facts, we have already abandoned the Humean theory of laws of nature.[16] The problem that Hegel points to is that in introducing the realm of laws (instead of a realm of forces or powers) as its candidate for the supersensible ground, Understanding makes use of a purely descriptive, Humean notion of law—and thus fails to meet its own explanatory requirement:

> [I]n the law the difference [of event types] itself is grasped *immediately* and taken up into the universal [i.e. into a lawful relation], thereby, however, giving the moments whose relation is expressed by the law a *subsistence* in the form of indifferent and [merely] implicit essentialities.[17]

The moments are 'indifferent' to each other, so that one does not necessitate the other. This 'indifference', however, contradicts the "inner necessity" (*ibid.*) that appertains to a law that is expected to have an explanatory role.

Hegel's criticism of Understanding's first attempt paves the way for its second attempt. In order to attain genuine explanations, the notion of *power* or *force* has to be introduced. To avoid leaving a residue of some unexplained plurality of forces, we need the notion of a *single unifying* force that can account for all the necessary explanations. Finally, in order to explain absolutely *everything* the notion of this force must entail all the various phenomena of the sensible world and it must manifest itself necessarily. So through its own 'experience' Understanding has arrived at the Spinozistic conception of force that Hegel had already deployed *ex cathedra* at the beginning of the chapter.

Second version. Understanding conceives the supersensible ground as a metaphysical force that manifests itself necessarily and serves as a foundation for the laws of nature:

> The law is thereby present in a twofold manner: once, as law [of nature] in which the differences are expressed as independent moments; and also

[16] See Pruss, *The Principle of Sufficient Reason: A Reassessment*, pp. 262–267.
[17] *Phenomenology of Spirit*, section 151; M, p. 92.

> in the form of a *simple* withdrawal into itself which again can be called *Force*, but in the sense not of a Force that is driven back into itself [i.e. in opposition to its manifestation], but Force as such, or the Notion of Force, an abstraction which absorbs the differences themselves of what attracts and what is attracted.[18]

Hegel illustrates this notion of force by evoking natural forces such as gravitation or electricity. But these are mere analogies. What really is at stake is the relation between the supersensible and sensible world. They now relate as ground and consequence such that both become dependent moments of this relation—both are 'absorbed' into the one force, as Hegel puts it.

But as previously mentioned, this second attempt, too, falls prey to criticism. If all things in the sensible world are taken as necessary manifestations of a supersensible ground, we indeed have, formally speaking, an explanation, but one that remains nothing but a "tautological movement" (section 155; M, p. 95). The problem is that the explanation is totally devoid of empirical content: whether there is a supersensible ground from which everything follows with necessity is a question that can be neither verified nor falsified. For, *first*, we do not have any independent epistemic access to this ground, and *second,* there is no way to test its existence or non-existence indirectly by any prediction of an event it would make possible. If the supersensible ground should not exist, all observable phenomena would remain the same—only the modal prefix would change. If it does not exist, the sensible world as it presents itself would be contingent, and if it does exist, the sensible world as it presents itself would be necessary. But this would be a difference that makes no (empirically detectable) difference.[19] A rationalist could perhaps deny the premise that we do not have any independent access to the supersensible world, arguing that the principle of sufficient reason is *evident* and that the existence of the supersensible ground is entailed by that. But aside from the fact that

---

[18] *Phenomenology of Spirit*, section 152; M, p. 92.

[19] See *Encyclopedia* I, § 136 (*The Logic of Hegel*, p. 248): "Every article in the import of Force is the same as what is specified in the Exertion: and the explanation of a phenomenon by a Force is to that extent a mere tautology. […] [The form of reflection-into-self] does not make the slightest addition to the content and to the law, which have to be discovered from the phenomenon alone. Another assurance always given is that to speak of forces implies no theory as to their nature: and that being so, it is impossible to see why the form of Force has been introduced into science at all."

Hegel does not have much sympathy for adducing "bare assurance" as a justification (section 76; M, p. 49), Understanding itself, as Hegel describes it, does not raise any such claim as evidence. Understanding is a *scientifically minded* consciousness. As such it is of a rationalistic bent and is convinced that everything has a sufficient reason; but at the same time it has an empiricist attitude and believes that the application of a concept is legitimate only if observations entail that the concept applies—including the notion of a sufficient reason. It cannot dispense with any of these principles, but together they cause trouble.[20]

Third version. It appears that consciousness is moving in a circle. It began by introducing the sensible given as the essence of reality—as what might be called the 'absolute'. But this candidate for the absolute collapsed under the pressure of its internal contradictions, and so consciousness was forced to introduce a new absolute in the form of a supersensible force that is explanatory for the sensible given. This new absolute also turns out to be contradictory and refers consciousness back to where it began—back to the sensible given (at least in the form of Perception). However, Understanding is not at its wit's end, since it still has one escape. The true absolute is the very same 'deconstructive' movement that leads consciousness from the sensible given as the absolute to the supersensible force as the absolute and back again. Hegel compares this movement with the circulation of blood and the life process it enables.

> This simple infinity, or the absolute Notion, may be called the simple essence of life, the soul of the world, the universal blood, whose omnipresence is neither disturbed nor interrupted by any difference, but rather is itself every difference as also their supersession; it pulsates within itself but does not move, inwardly vibrates [*erzittert*], yet is at rest. It

[20] See Albert Einstein's comment on the scientist's attitude regarding questions of epistemology: "[T]he scientist must appear to the systematic epistemologist as a type of unscrupulous opportunist; he appears as a realist insofar as he seeks to describe a world independent of the acts of perception[,…] as a positivist insofar as he considers concepts and theories justified only to the extent to which they furnish a logical representation of relations among sensory experiences" ("Reply to Criticisms", in *Albert Einstein: Philosopher-Scientist*, ed. by Paul Arthur Schilpp (La Salle, IL: Open Court, 1949), cited in Yourgrau, *A World Without Time: The Forgotten Legacy of Gödel and Einstein*, p. 38). Hegel writes in a similar vein about how people thought in the Age of Enlightenment: "Thus *experience* became the science of the world; for experience is on the one hand perception, on the other hand also the discovery of the law, the inner, the force, by reducing the given to its simplicity" (*Vorlesungen über die Philosophie der Geschichte*, p. 521, my translation).

> is self-*identical*, for the differences are tautological; they are differences that are none.[21]

This circulatory movement is sustained by the fact that the sensible world and the supersensible force are opposed to one another (so that the latter can explain the former) and that at the same time this opposition is cancelled (because it turns out to be void). The result is a movement that is described as a constant self-repulsion and self-attraction:

> The understanding thus *learns* that it is a *law* of *appearance itself*, that differences arise which are no differences, or that what is *selfsame repels* itself from itself; and similarly, that the differences are only such as are in reality no differences and which cancel themselves; in other words, what is *not selfsame* is *self-attractive*.[22]

The absolute, therefore, is contradictory: it is and is not identical to the sensible world, it is and is not identical to the supersensible world.

At this point Hegel introduces the topic of the "*inverted* world" (section 157; M, p. 96) that has baffled so many readers of the *Phenomenology*. The 'inverted world', it seems to me, is not a new stage in the development of Understanding; the term rather designates a possible misunderstanding of its third attempt to find a coherent theory. This misunderstanding consists in distinguishing two worlds, a 'proper' world and an 'inverted' world. In the latter, the "inverted in-itself", holds just the opposite of what is true in the former: "[W]hat in the law of the first world is sweet, in this inverted in-itself is sour, what in the former is black is, in the other, white" (section 158; M, p. 97). In the present case this means: there is a 'proper world'—the world we live in—in which the principle of identity has universal validity, and there is an 'inverted world'—a chimerical world dreamt up or perhaps discovered by philosophers—in which logical chaos prevails, a world in which there are no differences. But in truth the world Hegel describes is nothing but the familiar world whose internal contradic-

---

[21] *Phenomenology of Spirit*, section 162; M, p. 100. That Hegel has the blood circuit in mind is shown by following passage from the *Encyclopedia*: "Pulsation is living self-movement, the material of which can only be a *fluid*, or living *blood*. This movement can only be circulatory[.]" (In *Hegel's Philosophy of Nature*, vol. 3, § 354; p. 112). A little later he adds: "As rotatory and self-pursuing movement, and absolute quivering within itself [*dies absolute In-sich-Erzittern*], the blood constitutes the individual life of the whole[.]" (*ibid.*, p. 119).

[22] *Phenomenology of Spirit*, section 156; M, pp. 95f.

tions are exposed.[23] It is the untrained eye of common sense that does not recognize the familiar world in its philosophical representation. In a letter to van Ghert, Hegel writes: "To the uninitiated, the content of speculative philosophy must in any case appear as the inverted world, as contradicting all their accustomed concepts and whatever else seemed valid to them according to the so-called common sense."[24] To dissolve this appearance one has to recognize that both worlds are in fact one and the same and that the contradiction cannot be pushed into another world but lies at the heart of this one familiar world:

> From the idea, then, of inversion […] we must eliminate the sensuous idea of fixing the differences in a different sustaining element; and this absolute Notion of the difference must be represented and understood purely as inner difference, a repulsion of the selfsame, as selfsame, from itself, and likeness of the unlike as unlike. We have to think pure change, or *think antithesis within the antithesis itself*, or *contradiction*.[25]

It is possible that Hegel's description of the 'inverted world' is derived from a comedy of the same title that Ludwig Tieck published in 1798. At one point in the play Tieck calls the reader's attention to the fact that the inverted word he describes is not as different from the real world as one might expect:

> My dear readers, […] most things in the world adjoin to each other far more than you think; so be fair-minded, be indulgent, and not offended when you happen to find a paradoxical sentence; for what bewilders you in such a discomforting way may well be nothing but the feeling that

---

[23] Hans-Georg Gadamer sees in the 'inverted world' of *The Phenomenology of Sprit* a satirical *topos* whose purpose is to give insight into the real world ("Hegel's 'Inverted World'", p. 142): "What is found in the topsy-turvy world is not simply the contrary, the mere abstract opposite of the existent world. Rather this reversal in which everything is the opposite of itself makes visible in a kind of fun-house mirror the covert perversion of everything as we know it." In section 160, Hegel seems to make a further step: if the inverted world is separated from the 'proper' world and consistently understood as a world of contradiction, then exactly for this reason it turns out to be *at the same time* a world in which contradictions are *excluded*.

[24] Letter to van Ghert, 18 December 1812, in *Briefe von und an Hegel* I, p. 428, my translation. See also *Über das Wesen der philosophischen Kritik überhaupt* (*Jenaer Schriften 1801–1807*, p. 182, my translation): "Philosophy is by its very nature something esoteric. By itself it is neither made for the vulgar, nor capable of being cooked up for them; it is only philosophy because it is directly opposed to the understanding and thus even more opposed to common sense, by which we understand the local and temporal limitation of a lineage of human beings; in respect to common sense the world of philosophy is in and for itself an inverted world."

[25] *Phenomenology of Spirit*, section 160; M, pp. 98f.

> you are approaching the magnetic mountain that pulls out all iron joints and cramps: the ship that carries you, breaks, it is true, but hope, have confidence, you will come ashore where no iron is needed anymore.[26]

Clearly this is something readers of the *Phenomenology* should take to heart if they wish to approach the magnetic mountain of absolute knowledge.

Self-consciousness

But the chapter is not yet finished. Consciousness still has to learn the ultimate lesson that the true absolute is neither Force nor even Life, but *Self-consciousness*. It is, however, not that easy to see what is meant by this final move and how it is motivated. At least three possibilities suggest themselves as interpretations of the transition to Self-consciousness.

First, one might suppose that Hegel simply wants to point out that there is a structural analogy between Self-consciousness and Life that has to be acknowledged. Both are characterized by 'differences that are none':

> I distinguish myself from myself, and in doing so I am directly aware that what is distinguished from myself is not different [from me]. I, the selfsame being, repel myself from myself; but what is posited as distinct from me, or as unlike me, is immediately, in being so distinguished, not a distinction for me.[27]

But one does not see clearly why this mere analogy should motivate Understanding to give up its standpoint instead of simply supplementing it by this new trait.

Second, one could argue that the step from Consciousness to Self-consciousness is a transition from a realist point of view to an idealist one.[28] This is suggested by passages such as the following (section 165; M, p. 103):

> This curtain [of appearance] hanging before the inner world is therefore drawn away, and we have the inner being [the 'I'] gazing into the inner

---

[26] Tieck, "Die verkehrte Welt. Ein historisches Schauspiel in fünf Aufzügen [1798]", p. 287, my translation.

[27] *Phenomenology of Spirit*, section 164; M, p. 102.

[28] See, e.g., Pippin, *Hegel's Idealism: The Satisfactions of Self-Consciousness*, pp. 138ff.

> world […]. It is manifest that behind the so-called curtain which is supposed to conceal the inner world, there is nothing to be seen unless *we* go behind it ourselves, as much in order that we may see, as that there may be something behind there which can be seen.

Consciousness does not find anything but itself behind the curtain. This may sound as though the 'inner' or 'supersensible' world is somehow *constituted* by consciousness. However, it is unclear *why* the third stage in the development of Understanding should have such idealistic consequences.[29]

More promising, therefore, seems to be a third interpretation, according to which the problem with Understanding's last attempt at framing its position lies in its not being radical enough. Consciousness still misconceives the opposition of subject and object as something merely given, as something that is not yet seized on by the incessant deconstructive movement of contradiction.[30] The contradiction and oscillation between the two absolutes still *seem* to be elements of a movement that only characterises *objective* reality, without involving Understanding itself in any essential way. But insofar as the difference between sensible and supersensible world is cancelled, there remains no reason to take the sensible world as something *objective* that is distinct from the perceiving subject, in which case the difference between subject and object appears to be a mere subjective positing. (Insofar as the difference between sensible and supersensible world is given, however, this anti-realism is replaced again by a realist position.) The problem is that Understanding still does not realize that contradiction not only

---

[29] An interesting argument for a similar thesis is to be found in David Morris, "Hegel on the Life of the Understanding". Morris reads the chapter as a plea for an anti-realist position: "[I]t is our consciousness that posits a difference, within appearances, between the explanans and the explanandum" (*ibid*. p. 406). As evidence for this claim he refers to Hegel's account of the movement of 'explaining' in section 154. It seems to me, however, that in this section Hegel is reflecting on the aporetic situation that results from Understanding's second attempt to formulate its position and establishes in the course of this intermediate reflection a structure—the positing and negating of a difference—that is used afterwards to frame the (realist) third attempt. What I call the 'third version' is for Morris nothing but a sort of outward projection of the activity of the mind and thus rather a *misconceiving* of the truth that has already been reached. Although it turns out that this is close to the truth, I think it is a one-sided reading of the result of this chapter.

[30] This view is also taken in Fink, *Hegel. Phänomenologische Interpretationen der 'Phänomenologie des Geistes'*, p. 155, my translation: "But if all differences are in fact at the same time none, i.e. are annulled […], then the difference between subject and object is also a difference that has to be brought to disappear."

characterises the nature of its object but also is the very structure of the logical space that determines the *relation* between Understanding and its object in the first place. Thus Hegel writes (section 164; M, pp. 101f.):

> In the contrary law, as the inversion of the first law, or in the inner difference, it is true that infinity itself becomes the *object* of the Understanding; but once again the Understanding falls short of infinity as such, since it again apportions to two worlds, or to two substantial elements, that which is a difference in itself—the self-repulsion of the selfsame and the self-attraction of the unlike. To the Understanding, the *movement*, as it is found in experience, is here a [mere] happening, and the selfsame and the unlike are *predicates*, whose essence is an inert substrate.

'Infinite' is just another term for the essence of reality, the 'absolute'. For Understanding, as we have seen, the absolute is now the constant 'repulsion' and 'attraction' of the sensible and the supersensible realms. But the 'two worlds' at issue here are not any longer these two realms; rather they are the object of Understanding and Understanding itself, taken as an observing subject. Understanding misses the true nature of the infinite because the infinite is still conceived as an object. Thus Understanding cleaves to an immediately given difference of 'two substantial elements', i.e. to the difference between consciousness on the one side and an object on the other. Consciousness does not seem to be involved in the movement of contradiction at all, and therefore this movement is a '[mere] happening' for it. If Understanding acknowledged that the structure of a 'difference that is none' characterises its relation to the object, it would realize that the object is not simply opposed to it, but is also identical with it. So the new paradigm is no longer 'Force', nor 'Life', but 'Self-Consciousness'.

Concluding remark: The force of the Concept

So far I have presented Hegel as a critic of the notion of a metaphysical force that links the sensible world to a supersensible ground. But if we take the Hegelian system as a whole into account, we begin to see things differently. Does not the notion of a metaphysical force play a central role in the Hegelian system, too? In *The Philosophy of History* we read that

> Reason […] is *Substance*, as well as *Infinite Power* […]. On the one hand, Reason is the *Substance* of the Universe; viz., that by which and in which all reality has its being and subsistence. On the other hand, it is the *Infinite Energy* of the Universe; since Reason is not so powerless as to be incapable of producing anything but a mere ideal, a mere intention—having its place outside reality, nobody knows where; something separate and abstract, in the heads of certain human beings.[31]

And so it is not surprising that just at the end of the *Science of Logic*—where the logical movement finally reaches its goal, viz. the concept of a true Absolute that is beyond all contradictions—the notion of *force* comes again to the fore:

> What has to be considered here as method is nothing but the movement of the *Concept* itself […] which means that the *Concept* is *everything*, and that its movement is the *universal absolute activity*, the movement that determines and realises itself. The method is therefore to be acknowledged as the universal way of being, internal and external, without any restriction, and as the absolutely infinite force to which no object—insofar as it presents itself as external, distant from reason and independent from it—could resist, be of a particular nature against it and not be penetrated by it. […] It is therefore not only the supreme *force*, or rather the *only* and absolute *force* of reason, but also its supreme and only *drive* to find and to recognise *itself by itself in everything*.[32]

So, is what Hegel calls the *Concept* ultimately the supersensible ground that Understanding was looking for? Is *its* movement the metaphysical force whose necessary expression is the sensible world? That is indeed the interpretation offered by Schelling, who begins his criticism of Hegel in his history of modern philosophy by quoting precisely this passage from the *Science of Logic* and comments:

> The sentence: the movement of the Concept is the universal absolute activity, does not leave anything for God but the movement of the Concept, i.e. to be Himself nothing but the Concept. […] [T]he true creator is the Concept; with the Concept we have the creator and do not need any other besides. […] For [Hegel] God was not a bare concept, but rather the Concept was God; for him the Concept had the meaning of being God. His position is: God is nothing but the Concept that step by step becomes

[31] *The Philosophy of History*, p. 9.
[32] *Wissenschaft der Logik* II, pp. 551f., my translation.

> the self-conscious Idea, being the self-conscious Idea it externalises itself into Nature and, returning from it to itself, it becomes absolute Spirit.[33]

Sure enough, Schelling has little sympathy for this identification of God with the Concept: "But naturally abstracta cannot exist earlier—be taken for something real—than that from which they are abstracted: a becoming cannot be earlier than something that becomes, an existence earlier than something that exists."[34]

But Schelling's criticism seems to be based on a misunderstanding. This becomes clear when we consider more closely what Hegel understands by 'Concept'. At the point where this term is introduced in *Science of Logic*, Hegel invokes Kant's theory of 'transcendental apperception' according to which self-consciousness and the cognitive presence of the objective world are one and the same. The Concept is nothing but this identity:

> According to this exposition [in Kant's *Critique of Pure Reason*], the unity of the concept is that by which something is not a mere *feeling*, an *intuition*, or even a mere *representation*, but an *object*, whose objective unity is the unity of the 'I' with itself. […] Thus we are justified by a fundamental theorem of the Kantian philosophy in bringing to mind the nature of the '*I*' in order to recognize what the *Concept* is.[35]

The subject of transcendental apperception is no object, as Kant stresses again and again, and Hegel agrees:

> If we stick to the mere *representation* of the '*I*' as it floats before our ordinary consciousness, then the '*I*' is nothing but a simple *thing* that is also called *soul*, in which the Concept *inheres* as a possession or a property. This representation which does not engage in understanding either

---

[33] *Zur Geschichte der neueren Philosophie*, p. 112, my translation.

[34] *Ibid*., p. 123. This is, by the way, a criticism that Marx, too, levels against Hegel: to have confounded the abstract with the concrete. Marx (*The Poverty of Philosophy*, p. 90) writes: "Just as by dint of abstraction we have transformed every thing into a logical category, so one has only to make an abstraction of every characteristic distinctive of different movements to attain movement in its abstract condition—purely formal movement, the purely logical formula of movement. If one finds in logical categories the substance of all things, one imagines one has found in the logical formula of movement the absolute method, which not only explains all things, but also implies the movement of things. It is of this absolute method that Hegel speaks in these terms: 'Method is the absolute, unique, supreme, infinite force, which no object can resist; it is the tendency of reason to find itself again, to recognise itself in all things' (Logic, Vol. III.)." According to Marx, the true relations of production become invisible by this method.

[35] *Wissenschaft der Logik* II, p. 255, my translation.

> the '*I*' or the Concept cannot serve to facilitate or bring us closer to the understanding of the Concept.[36]

Since the Concept is nothing but the identity of self-consciousness and the cognitive presence of the objective world, and since there is, according to Hegel, no second objective world 'behind' the one that is cognitively present, we can say that in the Concept objective reality reveals itself as it is, without any remainder.

But in order for there to be real cognition the Concept has to assume a certain shape, a categorical framework, and with this it gets caught up again in the contradictions the Hegelian Logic undertook to expose and to criticize. In order to achieve philosophical knowledge, the Concept therefore has to criticize its *own* categorical framework, transform *itself* into another categorical shape, criticize it anew, etc.: the Concept has to set itself into motion, and this motion is nothing but the method of immanent criticism we already mentioned above. Since we now have seen that the Concept *is* the self-revelation of reality as it is in itself, we also understand that this movement is nothing external to reality: it is the self-revelatory movement of reality itself.

How, then, does the infinite force in which Hegel's philosophy culminates differ from the infinite force of traditional metaphysics that Hegel criticizes? Three aspects are crucial here. First, for Hegel the infinite force is the force of the Concept. As I mentioned above, the Concept is—just as the subject of transcendental apperception in Kant—no object at all; the Concept is not *part* of the objective world.[37] Due to this non-objective character of the Concept, its infinite force neither inheres in an object nor is an object—not even a supersensible one. It is a transcendental condition of there being any entities at all. Second, its force does not consist in causally generating things. Rather its force consists in unveiling reality as it is in itself. One may say that Hegel transforms the causal force of Spinozistic metaphysics into a revelatory force; but this force inherits from its Spinozistic predecessor its absolute infinity and boundlessness. There is no *Ding an sich* that could resist the revelatory force of the Concept. In this respect Hegel goes beyond Kant whose theory of transcendental apperception otherwise informs Hegel's notion of the Concept. Third, the infinite force

[36] *Ibid*., pp. 256f., my translation.

[37] This non-objective character of the Concept is emphasized especially in Falk, *Das Wissen in Hegels 'Wissenschaft der Logik'*, pp. 164–193.

impels a conceptual movement that never comes to a halt since this movement is provoked by the contradictions necessarily inherent in all the categorical frameworks of reality—even if they ultimately turn out to be illusory. So for Hegel it would be wrong to say that the force of the Concept is always already totally actualized—which was supposedly the case for the metaphysical force discussed in the chapter "Force and the Understanding" of the *Phenomenology of Spirit*.

CHAPTER THIRTEEN

SCHOPENHAUER'S TWOFOLD DYNAMISM

Valtteri Viljanen

Introduction

Arthur Schopenhauer (1788–1860) is a thinker famous for his powerful philosophical vision, the key idea of which we find, in effect, stated in the title of his masterpiece, *The World as Will and Representation*: "[T]his world is, on the one side, entirely *representation*, just as, on the other, it is entirely *will*" (W I, p. 4). This, of course, is his understanding of the Kantian distinction between the phenomenal and the noumenal realms, an understanding which, in fact, represents one way of bringing metaphysics back to post-Kantian thought.

At first blush it may seem that some central passages in which Schopenhauer presents his views on the concept of power or force (*Kraft*) makes him an unlikely candidate to be included in this book. Consider, for instance, the following (W I, pp. 111–112):

> [T]he word *will* [*Wille*], which, like a magic word, is to reveal to us the innermost essence of everything in nature, by no means expresses an unknown quantity, something reached by inferences and syllogisms, but something known absolutely and immediately, and that so well that we know and understand what will is better than anything else, be it what it may. Hitherto, the concept of *will* has been subsumed under the concept of *force* [*Kraft*]; I, on the other hand, do exactly the reverse, and intend every force in nature to be conceived as will. […] For at the root of the concept of *force*, as of all other concepts, lies knowledge of the objective world through perception, in other words, the phenomenon, the representation, from which the concept is drawn.

So the concept of force is 'drawn from the representation', whereas we have another, privileged kind of access to the noumenon as the will;[1]

[1] It should be noted that despite the above quote's strong claim concerning our acquaintance with the noumenon as the will, the treatment Schopenhauer gives to this topic in W II, pp. 196–198 makes it rather clear that we cannot have completely direct

and, according to Schopenhauer, "if we refer the concept of *force* to that of *will*, we have in fact referred something more unknown to something infinitely better known" (W I, p. 112). Given all this, it is not surprising that scholars seem to have been prone to view the Schopenhauerian concept of force as one pertaining exclusively to the natural sciences or, more generally, to the phenomenal realm, not to the noumenon.[2] It may surely be asked, what else could the aforesaid amount to but metaphysics in which the concept of force or power plays only an inferior role? Consider the following passage by Roland Hall:

> Schopenhauer's claim that the forces of nature […] are manifestations of the will, leads one naturally to view the will as a kind of force, even though a superior force, in spite of his warnings to the contrary. Even some commentators seem to have fallen into this trap.[3]

This is a trap because thereby the will is understood, according to Hall, "as an answer to a scientific question";[4] and indeed, all sciences concern, for Schopenhauer, only the phenomenal world, whereas the idea is, of course, to discern the underlying metaphysical nature of reality.

However, there is another kind of interpretive stand concerning the question of the relationship between the concept of force and the noumenal world. Bryan Magee laments Schopenhauer's choice of naming the thing in itself will. According to Magee, this welcomes far too many misunderstandings; for instance, "the fact that the concept [of will] is wholly derived from personal experience, and from observation of persons and animals, causes any application of it to carry implied overtones of the attribution of personality".[5] The terms Magee finds more apt for designating the thing in itself are all dynamic in character; after contending that due to the unhappy choice of the key term, Schopenhauer "has brought it about that all his formulations about it [the

---

or immediate access to the noumenon. For an instructive account of this and related discussion, see Janaway, *Self and World in Schopenhauer's Philosophy*, pp. 158–165.

[2] See e.g. Seelig, "Wille und Kraft"; Hall, "The Nature of the Will and its Place in Schopenhauer's Philosophy"; also Voigt ("Wille und Energie"), Young (*Willing and Unwilling*), and Brandt ("Über den Willen in der Natur") discuss this topic. That it is, according to Schopenhauer, the task of the natural sciences to study forces is beyond doubt: "It [the will] appears as such a blind urge and as a striving devoid of knowledge in the whole of inorganic nature, in all the original forces. It is the business of physics and chemistry to look for these forces and to become acquainted with their laws" (W I, p. 149).

[3] Hall, "The Nature of the Will and its Place in Schopenhauer's Philosophy", p. 73.

[4] *Ibid.*, p. 73. Hall (p. 74) himself holds that Schopenhauer sees the world biologically, as "a vast organism".

[5] Magee, *Self and World in Schopenhauer's Philosophy*, p. 142.

noumenon] carry, hidden somewhere on board, something counter-intuitive in their cargo", he claims that "[t]he term 'force', rejected by him, would have been vastly preferable. 'Energy' would have been better still".[6] Indeed, already before this Magee writes, "all material objects, in their inner nature, are primitive, blind, unconscious force inaccessible to knowledge. […] The whole universe is the objectification of this force".[7] Daniel Brandt contends similarly, "the *will* is a metaphysical force".[8] Dynamic concepts such as force and energy are thus regarded as invaluable for discerning the true nature of the Schopenhauerian conception of the noumenal world.

As I will show below, both of the above positions have their merits; but I find, on the whole, the latter preferable. Even if we grant that the concept of force has an important place in Schopenhauer's view of natural sciences and that we definitely should avoid treating Schopenhauer's theory of the will as a scientific hypothesis, it still does not follow that dynamic concepts would not be of utmost importance for metaphysics as Schopenhauer conceives it. A careful analysis that takes into account the context provided by early modern thinkers reveals that Schopenhauer's system is based on an elaborate theory in which the concepts of force and striving play a key role, and that this underpins a line of thought essentially dynamistic in character *both with regard to phenomenal and noumenal realms*. Understanding Schopenhauer's twofold dynamism and its conceptual architecture allows us not only to gain insight into the nature of his metaphysical enterprise by designating its place within the context of this book, but also to obtain a better grasp of his view of the relationship between the noumenal and phenomenal realms. I also put forward a reading of Schopenhauer's doctrine of the phenomenal world in which it is interpreted as a dynamic field of matter.

---

[6] *Ibid.*, p. 144.

[7] *Ibid.*, p. 139. For criticism, see Young, *Willing and Unwilling*, pp. 64–66; Janaway, *Self and World in Schopenhauer's Philosophy*, pp. 248–249.

[8] Brandt, "Über den Willen in der Natur", p. 265, translation mine. However, Brandt (p. 265) compares the will as the thing in itself to "the universe's energy before the Big Bang", and in this respect he seems to treat the will as a scientific hypothesis. D. W. Hamlyn (*Schopenhauer*, p. 95) contends, after deeming some other interpretations of Schopenhauer's conception of the will unacceptable: "It is a less misleading interpretation to take the will as being for Schopenhauer a kind of force that permeates nature and which thus governs all phenomena." Hamlyn (p. 96) also claims that the will "is the force that determines that phenomena should have a course" and that "phenomena can be seen as governed by a force which is to be identified with the will".

The will as striving

As already noted, Schopenhauer adopts the Kantian idea that reality is not exhausted by our representations, there is also the thing in itself,[9] and gives his own twist to this doctrine by arguing that the nature of the thing in itself is not, *contra* Kant, totally unknowable to us. Shortly after having labelled the thing in itself will, Schopenhauer designates its place in his conceptual framework. The guiding idea is that "the concept of will receives a greater extension than it has hitherto had" (W I, p. 111). What is at stake here? The following passage is revealing:

> But hitherto the identity of the inner essence of any striving and operating force in nature with the will has not been recognized, and therefore the many kinds of phenomena that are only different species of the same genus were not regarded as such; they were considered as being heterogeneous. Consequently, no word could exist to describe the concept of this genus. I therefore name the genus after its most important species[.][10]

So the claim is that the *essence* of strivings and forces we find in nature is in some sense *identical with* the will, they occupy the same level in Schopenhauer's conceptual hierarchy by being all species of a genus strictly speaking unknown to us.[11] The will, however, is especially important, according to Schopenhauer, because we have direct—or at least most immediate (W II, pp. 197–198)—access to it. Thus Schopenhauer claims,

> [w]e must now clearly separate out in our thoughts the innermost essence of this phenomenon, known to us directly, and then transfer it to all the weaker, less distinct phenomena of the same essence, and by so doing achieve the desired extension of the concept of will.[12]

This leads him to make the already-quoted claim, namely that "[h]itherto, the concept of *will* has been subsumed under the concept of *force*; I, on the other hand, do exactly the reverse, and intend every force in nature to be conceived as will" (W I, p. 111). However, I think we should keep in mind how weak the proposed subsumption in fact is: the mere fact

---

[9] Christopher Janaway (*Self and World in Schopenhauer's Philosophy*, p. 170) notes, very aptly I think, that the thing in itself "must be there because, as Schopenhauer puts it, it does not make sense to talk of appearance unless there is something that appears".

[10] W I, p. 111.

[11] On the unknowability of the will, or the unanswerability of the question concerning the thing in itself, see especially W II, p. 198.

[12] W I, p. 111.

that one species of a genus is allegedly more clearly understood than others grounds the decision to call the genus 'the will'; the chosen species holds no other, conceptually strict, kind of authority over the other species.

When Schopenhauer elaborates his views on metaphysical issues, dynamic terms abound. Consider the following passages:

> In fact, absence of all aim, of all limits, belongs to the essential nature of *the will in itself, which is an endless striving*.[13]
>
> As soon as knowledge, the world as representation, is abolished, nothing in general is left but mere will, blind impulse.[14]
>
> It [the will] always strives, because *striving is its sole nature*, to which no attained goal can put an end.[15]
>
> We have long since recognized this striving, that constitutes the kernel and in-itself of everything, as the same thing that in us, where it manifests itself most distinctly in the light of the fullest consciousness, is called *will*.[16]
>
> [T]he constant striving, which constitutes the inner nature of every phenomenon of the will[.][17]
>
> The will is that primary and original force itself, which forms and maintains the animal body[.][18]
>
> This, of course, is the universal force of nature, which, in itself identical with the *will*, becomes here, so to speak, the soul of a very brief quasi-life.[19]

Before conducting closer analysis of Schopenhauer's use of dynamic notions, we can make some general observations concerning these notions in the Western thought. The most important thing to note is that in the metaphysical tradition much of this book focuses on, the concept of power (*dunamis, potentia*) plays a key role. Already the Eleatic Stranger of Plato's *Sophist* (247d–e) suggests that the mark of real things is power (*dunamis*) to affect or to be affected. The influential idea that *to be is to be causally powerful* goes nowadays by the name of 'the Eleatic Stranger's reality test'.[20]

---

[13] W I, p. 164, emphasis added.
[14] W I, p. 180.
[15] W I, p. 308, emphasis added.
[16] W I, p. 309.
[17] W I, p. 312.
[18] W II, p. 293.
[19] W II, p. 299.
[20] Moreover, the *Timaeus* can be interpreted as presenting a dynamistic view of the fundamental nature of reality; see chapter one of this volume.

For many early modern thinkers, the relationship between metaphysics and physics was a topic of greatest importance, and this had a profound impact on the way in which they thought about power. Leibniz is especially instructive in this connection. Force occupies a central place in his physics, but he thought that adequate grounding for physics can only be found in metaphysics in which basic constituents of reality, monads, have intrinsic power to transfer themselves from one perception to another. Drawing the line between physics and metaphysics to some extent the way Leibniz did, Schopenhauer quite often specifies rather carefully whether he is talking about forces as *phenomenal manifestations* of the underlying metaphysical basis, or about *the dynamic nature of that basis*. For example, when he discusses "the forces of impenetrability, gravitation, rigidity, fluidity, cohesion, elasticity, heat, light, elective affinities, magnetism, electricity, and so on"—all of which undoubtedly belong to the phenomenal world[21]—he makes it clear that we are dealing with "the thing-in-itself which, *by appearing, exhibits those phenomena*" (W I, p. 122, emphasis added); whereas when he talks about the striving "that constitutes the kernel and in-itself of everything" (W I, p. 309), it is beyond doubt that we are dealing with the noumenal world.

However, the way in which Schopenhauer sometimes uses dynamic concepts creates interpretative problems. For instance, when he says that "I must recognize the inscrutable forces that manifest themselves in all the bodies of nature as identical in kind with what in me is the will, and as differing from it only in degree" (W I, p. 126), it is somewhat difficult to discern whether the forces in question should be understood as inhabitants of the phenomenal or the noumenal world.

It seems to me that the notion of force occupies a rather complicated and interesting limiting position between the phenomenal and the noumenal realms. According to Schopenhauer, forces are something the natural sciences inevitably end up presupposing despite the fact they remain, in the end, incomprehensible to such fields as physics and chemistry. Moreover, forces are something that point toward another kind of enquiry, namely metaphysics; or as Schopenhauer puts it,

> the universal, the common reality, of all phenomena of a definite kind, that which must be presupposed if explanation from the cause is to have sense and meaning, is the universal force of nature, which in physics must

[21] In W II, p. 314, Schopenhauer talks about gravity as an empirical quality.

> remain a *qualitas occulta*, just because *etiological explanation here ends and the metaphysical begins*.[22]

This is the reason, I think, why it is difficult to say about some passages in which the notion of force makes its appearance whether Schopenhauer is discussing phenomenal or noumenal matters: in the universal force of nature, physics meets metaphysics. "[M]etaphysics never interrupts the course of physics, but only takes up the thread where physics leaves it, that is, at the original forces in which all causal explanation has its limits" (W II, p. 299).[23]

Although Schopenhauer is not altogether clear about this, I think his view to be as follows. There are many kinds of original forces of nature which appear to our senses and can be, at least to some extent, be explicated by philosophical reflection, but do not allow proper scientific elucidation;[24] the "force itself", apparently captured by the idea of the universal force of nature, is not only "entirely outside the chain of causes and effects" and "outside time" but also "generally outside the province of the principle of sufficient reason" (W I, p. 131)—indeed, it seems so stripped of everything constituting the phenomenal world that one may well wonder how it can appear to our senses at all. Nevertheless, Schopenhauer dubs it the "immediate *objectivity* of the will" (W I, p. 131, emphasis added), which leaves it unambiguously to the phenomenal side of the phenomenal-noumenal divide. So although they give an important lead to metaphysics, and although some passages might suggest otherwise, I think Schopenhauer's considered view is, in the end, that forces pertain only to the phenomenal realm and are the basic constituents of natural phenomena. In this respect, the first of the main lines of interpretation presented in the introduction—the one treating force as a concept belonging exclusively to the phenomenal realm—is in the right. In the next section, I will provide my own account of Schopenhauer's view of forces and their operation.

That *forces* are phenomena does not, however, mean that dynamic concepts would have no work to do in Schopenhauer's metaphysics. To

---

[22] W I, p. 140, the latter emphasis added.

[23] See also *Über den Willen in der Natur*, p. 323.

[24] Hamlyn (*Schopenhauer*, p. 77) notes that force is "an explanatory concept meant to explain why certain kinds of causality takes place", which holds true (for more on force and causality, see below); but Schopenhauer would obviously not—and I cannot see why would he be forced to—be ready to accept the claim Hamlyn makes after this: "In that sense its invocation automatically takes us beyond phenomena" (*ibid.*).

show this, we can begin by reconsidering the aforementioned scheme of classification. There Schopenhauer made it clear that the *essence* of forces is equal with the will in his conceptual hierarchy; and given his way of drawing the line of division between physics and metaphysics, precisely clarifying the nature of forces presupposed by natural sciences is an important task of metaphysics (see especially W II, pp. 172–173). Now, it would be difficult to claim that the inner essence of forces is something non-dynamic in character; and indeed, I think it is precisely here that the notion of striving (*Streben*) steps in. That notion is in many places used to account for the manifest, phenomenal operations of the will; but, as we have seen, Schopenhauer is quite comfortable to designate also the inner nature of things as striving: he talks about "the constant striving, which constitutes the inner nature of every phenomenon of the will" (W I, p. 312), thus apparently also forming the arguably dynamic essence of the universal force of nature. Given the aforementioned classification, it seems to follow that will and striving are species of the same genus.

Although what may be called Schopenhauer's 'official' stand is that as the will is the best-known member of the aforementioned genus it is in terms of the will that we must conceive all the other species of that genus, some noteworthy passages nevertheless point to quite a different direction. When confronting the task of providing an account of the will, Schopenhauer claims that *striving is the essence of the will*: "the essential nature of the will in itself" is "an endless striving" (W I, p. 164), "striving is its [the will's] sole nature" (W I, p. 308). I noted already above that Schopenhauer's grounds for subsuming the concept of force under the concept of will are not particularly strong, and the talk of striving as the nature of the will suggests that it is, in fact, *striving* that emerges as the dominant concept; it may perhaps be seen as the term designating the unknown genus itself. Recall:

> We have long since recognized this striving, that constitutes the kernel and in-itself of everything, as the same thing that in us, where it manifests itself most distinctly in the light of the fullest consciousness, is called *will*.[25]

At any rate, it is uncontroversial that Schopenhauer finds 'striving' a particularly apt term to describe the *nature* of the will, which is already enough to show that the notion of striving has a central role in his metaphysics.

---

[25] W I, p. 309.

To further elucidate the role of the concept of striving in Schopenhauer's system, we can examine the way in which the notion has been connected to a recent *essentialist* interpretation, put forward by Dale Snow and James Snow, of Schopenhauer's philosophy. Snow and Snow argue that Schopenhauer transforms the Kantian distinction between the phenomenon and the thing in itself "to one in which the thing in itself is the essence of all that is";[26] the thing in itself "is not a causal ground of phenomena but rather the essence of all that is".[27] Christopher Janaway elaborates this line of interpretation as follows:

> The Schopenhauerian thing in itself, inasmuch as it is knowable in philosophical reflection, is the *essence* of the world of appearance, not in any way its cause. And it is the essential *aspect* of that same world of appearance, not any thing of a distinct ontological kind.[28]

Now, Janaway connects this line of thought to the concept of striving: "The single essential character of the world is that everything in it is alike in continually 'striving' to be, yet for no point or purpose beyond its merely being."[29] Slightly later he contends,

> the essence of things contains no rationality, no higher purpose, no final vindication of the world or the self. The world, and humanity within it, merely strives to be, in multiple instantiations, in perpetuity. Our inner nature, and that of the world-whole, pushes each of us hither and thither, overwhelms our efforts with its own larger striving, and leads us only into suffering.[30]

This, I think, is well-put indeed, and I particularly appreciate the fact that from this perspective it is obvious that striving appears as the essential feature, the nature, the ontologically pre-eminent aspect, not only of every individual but the world as a whole. Thus the in-itself of everything—apparently also of our wills—is not, in fact, *a thing* but *a dynamic factor*, namely striving, that underpins all existence. Further, this is something revealed by philosophical reflection, not by physical experimentation. This insight is, to my mind, the cornerstone of Schopenhauer's essentially dynamistic metaphysics.

---

[26] Snow and Snow, "Was Schopenhauer an Idealist?", p. 644.
[27] *Ibid.*, p. 648.
[28] Janaway, "Will and Nature", p. 166.
[29] *Ibid.* Already earlier in the same paper (p. 144) Janaway writes: "But Schopenhauer wants to say that at the broadest level of generality every part of the world possesses the same essence as I do; like me it—as it were—pursues, strives, or tends somewhere."
[30] *Ibid.*, pp. 166–167.

Schopenhauer nowhere, to my knowledge, properly explicates what he understands by striving, but by examining the way in which the notion was treated by some of his notable predecessors we can clarify its meaning and gather reasons for its central role in the Schopenhauerian scheme of things. First, and perhaps most importantly, it is a well chosen term given Schopenhauer's antagonist view of nature: "[E]verywhere in nature we see contest, struggle, and the fluctuation of victory[.] […] Every grade of the will's objectification fights for the matter, the space, and the time of another. […] [O]nly through it [this struggle] does nature exist" (W I, pp. 146–147; see also W I, p. 309). At least since the birth of modern philosophy, striving was understood as exercising one's powers against contrary powers. Descartes sees his notion of *conatus* (i.e. striving or endeavour) as including resistance and effort;[31] for Spinoza, *conatus* is an expression of God's power that forms our essence and amounts to exerting ourselves against opposition to get rid of harmful passions;[32] and Leibniz rightly emphasizes how different from a thing that merely remains in its prevailing state is a thing that is not indifferent, but is endowed with "a force and, as it were, an inclination to retain its state, and so resist changing".[33] In other words, the capacity forces or powers have to *resist opposition* was commonly explicated in terms of (some kind of) striving they are endowed with; and since the Schopenhauerian phenomenal world is certainly one in which things find themselves continually and resiliently opposing each other, it is understandable that precisely striving forms their innermost nature. As Schopenhauer puts it, the will as striving "can be checked only by hindrance" (W I, p. 308), and this corresponds to the fact that "[w]e see striving everywhere impeded in many ways, everywhere struggling and fighting" (W I, p. 309).

Second, although the term 'striving' can easily be fitted into a teleological framework, and although it is a close relative of such terms as 'trying', it should be kept in mind that in the Cartesian vocabulary '*conatus*' has a technical meaning that does not involve any kind of conscious aiming at ends:[34] it refers simply to the tendency corporeal

[31] See *Principles of Philosophy* II.43; CSM I, 243; AT XI, 84.
[32] See propositions 6, 7, and 37 of the third part of the *Ethics*.
[33] AG, p. 172.
[34] For an instructive discussion of this, see Curley, *Behind the Geometrical Method*, p. 107.

things have to stay in their prevailing state. Spinoza generalizes this line of thought in his all-encompassing theory of finite existence, human existence included, and although his traditional status as an arch-enemy of all teleology has recently been questioned,[35] I think that his theory is meant to be free of all teleology.[36] Leibniz argues that there are two kingdoms, that of nature and that of grace, efficient causes pertaining to the former, final to the latter; and as the notion of striving belongs predominantly to his physics and hence to the kingdom of nature, it does not carry any teleological overtones.[37] Now, Schopenhauer emphasizes again and again that the will is endless, blind, and without any aim—"the will dispenses entirely with an ultimate aim or object. It always strives, because striving is its sole nature, to which no attained goal can put an end" (W I, p. 308)—and given the way in which it was used by his seventeenth-century predecessors, the notion of striving gives him possibility to account for the non-teleological and non-inert nature of the noumenon. Schopenhauer's stand is that purposeful action needs a motive and thus falls under the principle of sufficient reason (W I, p. 163), but as the noumenon has no ground it is untouched by that principle and can have no motive or purpose.[38]

It is worth noting that, in Schopenhauer's framework, 'striving' is—unlike 'force'—equally at home in both the phenomenal and the noumenal realms. We find Schopenhauer stating,

> as every body must be regarded as the phenomenon of a will, which will necessarily manifest itself as a striving, the original condition or state of every heavenly body formed into a globe cannot be rest, but motion, a striving forward into endless space, without rest or aim[,][39]

---

[35] See especially Garrett, "Teleology in Spinoza and Early Modern Rationalism"; Lin, "Teleology and Human Action in Spinoza".

[36] For more on this, see my *Spinoza's Dynamics of Being*, chapters 11–12.

[37] See *New Essays on Human Understanding* 2.21.

[38] Schopenhauer may be seen as running into trouble by claiming, in the very same paragraph, both that the will is blind and that it always wills life (W I, p. 275). However, the fact that the will is will to life (*Wille zum Leben*) should not be taken to mean that there is a drive aiming at animate existence; rather, life "is nothing but the presentation of that willing for the representation" (W I, p. 275), i.e. one way in which the will appears to us (see also W I, p. 220), and the will can thus be called will to life. The idea is obviously simply that the noumenon as striving is the inexhaustible source of existence, also animate existence (cf. Magee, *The Philosophy of Schopenhauer*, p. 155).

[39] W I, p. 148.

so evidently striving is not only the essence of the will but—at differing levels of consciousness and purposefulness—also its important manifestation, giving the forces of nature their resistant character (see W I, p. 149). This squares well with Schopenhauer's contention that "the task of metaphysics is not to pass over experience […], but to understand it thoroughly" (W I, p. 428), "philosophy is nothing but the correct and universal understanding of experience itself" (W II, p. 183):[40] the phenomenal world that exists through strivings and contests of opposing forces (W I, p. 147) strongly points towards the corresponding nature of the noumenal reality;[41] it may be said, I think, that the idea of the thing in itself as striving solves "the riddle of the world" (W I, p. 428) by combining the inner experience we have of our will with what Schopenhauer evidently regards as undeniable, that the world before our eyes is one of incessant struggle.

Finally, we may observe that when he discusses the nature of the noumenon, Schopenhauer ends up, I think, with a monistic position. This is so because he argues that plurality is possible only through time and space that are forms of objects of representation; but as the will as the noumenon "lies outside time and space", it is "outside the possibility of plurality"; hence, "[i]t is itself one" (W I, p. 113) and "indivisible" (W I, p. 128). Schopenhauer emphasizes that despite the manifold of 'objectifications' in which the will manifests itself in the phenomenal world, "it is everywhere one and the same" (W I, p. 118). Thus I think it is well-warranted to see Schopenhauer as a monist;[42] and given that

[40] See also *Über den Willen in der Natur*, p. 324. Cf. Hamlyn, *Schopenhauer*, p. 80: "The thing-in-itself provides a kind of explanation of phenomena, but not one that involves the principle of sufficient reason. It does not explain each phenomenon taken separately; it explains them taken as a whole."

[41] Cf. Magee, *The Philosophy of Schopenhauer*, pp. 154–155: "When reading Schopenhauer's numerous descriptive passages about the endless restlessness of matter and the teeming activity of the animal and human worlds […] it is important to remember that these are not descriptions of the will as it is in itself but only as it manifests itself in the world of phenomena. Nevertheless it is clear that he takes this as telling us something about the essential nature of the will."

[42] Dale Snow and James Snow ("Was Schopenhauer an Idealist?", p. 644) argue against interpreting Schopenhauer as a monist: "In view of Schopenhauer's polemics against Schelling, it would also be a mistake to characterize him as a metaphysical monist. The terms of his rejection of Schelling's philosophy of identity—itself a revival of Spinozism—makes clear that he is not a thoroughgoing monist." However, as Schopenhauer quite obviously is a monist with regard to the will, and as, in the final analysis, only the will in the strict sense exists—both the subject and its correlative, matter, are merely *manifestations* of the will (see e.g. W II, pp. 15–16)—I think a rather strong case for regarding Schopenhauer as a monist can be made.

the noumenon is will as striving, I think it is well-warranted to regard him as espousing one kind of dynamistic monism.[43]

The phenomenal world as a dynamic field

In what follows, I aim to offer an account of Schopenhauer's doctrine of the phenomenal world. In consonance with the above discussion of the noumenal essence of things, Schopenhauer's theory of the phenomenal objectifications of the will—i.e. entities such as inanimate matter, plants, animals, and human beings—has its own distinctive dynamistic flavour. That doctrine contains a wealth of elements: forces of nature, causality, form, matter, time, space, and even Platonic Ideas. I shall argue that an illuminating way to understand all this is to interpret Schopenhauer as a kind of field theorist concerning the world of representations.

In his *Study of Spinoza's* Ethics, published in 1984, Jonathan Bennett presents the famous, and controversial, 'field metaphysical' interpretation of the Spinozistic extended substance.[44] Its central idea is that the monistic substance under the attribute of extension, i.e. the extended substance or space, is one continuous field without really distinct parts; corporeal things are, metaphysically speaking, ways in which space is modified, or states or properties occupying certain regions of the unified spatial field. This kind of theory may sound strange, but really is not; as Mark Wilson puts it, "a physical quantity (such as mass, temperature or electrical strength) appears as a field if it is distributed continuously and variably throughout a region".[45]

Now what I want to argue is that a field theory of this mould can be quite helpful in understanding Schopenhauer's theory of the phenomenal world. Here the nature and status of matter (*Materie*) emerges as the crucial issue.[46] Schopenhauer discusses matter in a highly complex

---

[43] In this respect he comes close to Spinoza (see chapter nine of this volume). Interestingly, in the final chapter of the second volume of his main work Schopenhauer himself contends: "[T]he world exists, with me as with Spinoza, by its own inner power and through itself" (W II, p. 644).

[44] Bennett, *A Study of Spinoza's* Ethics, chapter 4; see also Bennett, "Spinoza's Metaphysics"; *Learning from Six Philosophers*, chapter 7. For an interpretation that combines Bennett's field metaphysical interpretation with a dynamic view of Spinozistic substance, see my "Field Metaphysic, Power, and Individuation in Spinoza".

[45] Wilson, "Field Theory, Classical", p. 668.

[46] The *a priori* forms of objects are, for Schopenhauer, space, time, and causality (see especially W I, §§ 2–3). As Janaway (*Self and World in Schopenhauer's Philosophy*,

way in several places of *The World as Will and Representation*, especially in § 4 of the first volume and chapters 1, 4, and 24 of the second. The starting points of his view can be summed up, I think, as follows. Although pure matter is not only non-spatial and non-dynamic but also never perceived, matter is still by no means a mere *ens rationis*: it provides the all-important common reference point, the required 'filler' so to speak, of the forms of our perception—it is where time, space, and causality are combined.[47] So although we can never perceive matter purely as such, matter still "enters into every external experience as a necessary constituent part thereof" (W II, p. 306); indeed, "sensibility presupposes matter" (W I, p. 11; see also W II, p. 15). The governing idea here is that *matter is the common substratum of the whole phenomenal world*, that "in which the world as *representation* exhibits itself" (W II, p. 306); or, to put things in Kantian terms, it is "the final subject of all the predicates of every empirically given thing, what is left after removing all its properties of every kind" (W I, p. 489). Hence to be *real* or *actual* in the phenomenal world equals being material (cf. W II, p. 47). Given all this, we should not be surprised to find Schopenhauer designating matter as nothing less than one of the two "fundamental conditions of all empirical perception" (W II, p. 15), the other being the subject, or the intellect; these two exist only for each other (*ibid.*), and "together constitute the *world as representation*" (W II, p. 16). The central position of matter is further witnessed by the fact that matter is said to be the phenomenal counterpart of the will: "[E]very object as thing-in-itself is will, and as phenomenon is matter" (W II, p. 307). Matter is "the mere *visibility of the will*" (W II, p. 45).

However, like everything phenomenal, also matter exists only as conditioned by the forms of our perception—Schopenhauer is eager to emphasize that his doctrine is a form of idealism, and that matter only exists for the transcendental subject. The relationship between

---

p. 172) notes, "there may be some surprise at the category of *substance* going out of the window, since it is the one category besides *causality* that has continued to be thought of as of crucial importance in the Kantian scheme of things". The category of substance is obsolete, Schopenhauer argues, because it has, in fact, been abstracted from the concept of matter and does thus not contain anything that the latter concept would not already contain (W I, pp. 490–491). Thus, "the concept of substance must be entirely rejected, and that of matter be everywhere put in its place" (W I, p. 491). See also *On the Fourfold Root of the Principle of Sufficient Reason*, p. 67.

[47] On problems pertaining to this, see Morgenstern, *Schopenhauers Philosophie der Naturwissenschaft*, pp. 97–98.

matter and the forms of space and causality proves to be especially important: the will "exhibits itself forthwith as body, that is, as matter clothed in form and quality; but form is conditioned by space, and quality or activity by causality" (W II, p. 309). As the former linkage, that between matter and space, is the one that sets the field theoretical interpretation underway, I will discuss it first.

After having quoted with approval the view he assigns to Plotinus and Bruno, "matter itself is not extended, and consequently is incorporeal" (W II, p. 308; see also p. 45), Schopenhauer goes on to explain that "space, which is the form of our intuition or perception, endows matter with extension" and that "we can perhaps picture matter to ourselves without weight, but not without extension, force of repulsion, and persistence; for it would then be without impenetrability, and consequently without space-occupation, that is to say, without the *power of acting* [*Wirksamkeit*]" (W II, p. 308). We can, for now, disregard the reference to power of acting—or perhaps we should simply say to efficacy—and note that how ever bare may pure matter be, *for us* it can appear only as extended, because it falls under space as a form of our perception. Slightly later Schopenhauer confirms the crucial significance of space for matter: "Space is the perception-form of matter, because space is the substance [*Stoff*] of mere form, but matter can appear only in the form" (W II, p. 308).

Thus as the substratum of the phenomenal world matter is extended and exists "in all the dimensions of space and throughout the whole length of time" (W II, p. 48). This gestures towards a view according to which *matter forms a field* apart from which nothing phenomenal can exist. This line of interpretation receives ample support especially from the table of the 'praedicabilia *a priori*' located in the fourth chapter of the second volume of *The World as Will and Representation*. Consider the following:

> Both [matter and the subject] belong to the phenomenon, not to the thing-in-itself, but they are the framework of the phenomenon.[48]
>
> There is only *one* matter, and all different materials are different states of it: as such it is called *substance*.[49]

[48] W II, p. 15.
[49] W II, p. 48.

> The shapes and forms are innumerable: matter is one, just as the will is one in all its objectifications.[50]
>
> [I]t [matter] is never immediately apprehended, but is always only added in thought as that which is identical in all things under every variety of quality and form, as *that which is precisely substantial, properly speaking, in all of them*.[51]
>
> Matter is homogenous and a *continuum*, in other words, it does not consist of originally heterogeneous (homoiomeries) or originally separate parts (atoms); it is therefore not composed of parts that would be separated essentially by something that was not matter.[52]
>
> Matter has no origin or extinction, but all arising and passing away are in matter.[53]

To my mind, what Schopenhauer puts forward is, if not by name, a fine representative of a field theory: *everything phenomenal takes place in a unified, permanent, and endless spatio-temporal field of matter*. On this interpretation, all real empirical objects are, philosophically speaking, parts of this total field that is not built up from finite bodies. All objects are matter in some determinate state, or as Schopenhauer puts it: "*Things, that is to say, states of matter*" (W II, p. 42; see also p. 13). Already in the early *Fourfold Root* (p. 65) he states, "whatever the body's form may have become, its substance, i.e., its matter, must exist and be found somewhere". There thus exists basic stuff,[54] matter, which forms an infinite continuum with no non-material gaps, but not one without divergence. Matter can only be encountered in some certain state, modified in a certain manner, i.e. as things; just as Spinoza's extended substance is always modified in some way, we can never find Schopenhauerian matter as it is, without any form or quality.

From early on, Schopenhauer was fascinated by Plato's doctrine of ideas and wanted to incorporate it into his system. The way in which he does this, however, has been often found problematic; for instance Janaway holds that "Schopenhauer's doctrine of ideas is remarkable and

---

[50] W II, p. 309.
[51] W II, pp. 311–312, emphasis added.
[52] W II, p. 48.
[53] W II, p. 49.
[54] As Martin Morgenstern (*Schopenhauers Philosophie der Naturwissenschaft*, pp. 101–102) points out, matter means, for Schopenhauer, both basic stuff (*Stoff*) and substance. Moreover, Morgenstern argues that as *Stoff* matter is something extended, whereas as substance it is not (and is hence something that can only be thought about, not perceived).

full of difficulties".[55] For our purposes the important point is that, apart from being central to Schopenhauer's aesthetic and ethical concerns, the doctrine of ideas also has considerable amount of work to do in his theory of the phenomenal world, and for the following reason. Given the above presented framework, it can and should be asked, what makes certain distributions of states of matter *individuals*? On what grounds can it be said that certain regions in the material field are occupied by individuals? Now, Plato's Ideas equal, for Schopenhauer, "*grades of the objectification of the will*" that exist "as the unattained patterns" of individuals, "or as the eternal forms of things" that "remain fixed" and are "subject to no change" (W I, p. 129). "These grades are certainly related to individual things as their eternal forms, or as their prototypes" (W I, p. 130; see also §§ 31–32). As commentators have pointed out, with 'Ideas' Schopenhauer refers, then, to "those most universal features of the natural world that are shared in by the various individuals within it".[56] Moreover, they have been said to "operate in the world *like dies that put a uniform stamp* on innumerable phenomena which are then, though all different, all the same";[57] I would only add that what is being stamped is the material field, the stamping resulting in individuals as specifically distributed states of matter. So although the ontological status of ideas is unclear,[58] we can see that they have here a clear and important role to play (and similar to the one essences have in Spinoza's metaphysics). We should also take heed of the fact that even though Schopenhauer so often emphasizes that the will is not rational, it nevertheless manifests itself in the Ideas that are its "adequate objectivity" (W I, pp. 179–180) that, as we have seen, shape the phenomenal realm. Given this, it may well be asked, to what extent can the will be regarded as arational, if that which objectifies it *adequately* is something akin to Platonic Ideas, the classic source of order and rationality we find in the world? It thus seems that Schopenhauer needs something to account for the fact that the world we perceive is not a chaotic flux but is endowed with structure and order—however precarious those may be—, and turns to the notion of Idea to explain this. This is, then, one

[55] Janaway, *Self and World in Schopenhauer's Philosophy*, p. 10.

[56] Janaway, *Self and World in Schopenhauer's Philosophy*, p. 254; see also Hamlyn, *Schopenhauer*, chapter 6. Only human beings have their unique Platonic Ideas; see W I, pp. 132, 158.

[57] Magee, *The Philosophy of Schopenhauer*, p. 150, emphasis added.

[58] On this, see Janaway, *Self and World in Schopenhauer's Philosophy*, pp. 277–278; Snow and Snow, "Was Schopenhauer an Idealist?", p. 648.

route through which a basic kind of rationality may be seen to find its way into his system.[59]

Moreover, we have already noted that matter can only appear in some definite (spatial) form. Now, given the connection between Ideas and forms, expressed in passing in above quotes and explicitly in "by *forma substantialis* the scholastics in fact understood what I call the grade of the will's objectification in a thing" (W I, p. 211; see also p. 143), it is evident that there is, in a sense, a hylomorphic element in Schopenhauer's system. This is why so much of what we have discussed above can be stated in scholastic terminology of *forma* and *materia*:

> [T]he *form* alone constitutes *the thing*, that is to say, it establishes the *difference* of things, whereas matter must be conceived as homogeneous in all. The scholastics therefore said: *Forma dat esse rei*. […] The union of *form* with *matter* […] gives the *concrete*, which is always an individual, hence *the thing*. It is the *forms*, whose union with *matter*, that is to say, whose appearance in matter, by means of a change, is subject to the law of *causality*.[60]

Platonic Ideas thus operate, much like substantial forms do for the scholastics, as the basis for individuation.[61] It is thus not difficult to find a place for the notion of form in the interpretation put forward here: forms have an important task of designating certain states (that occupy certain regions on the field of matter) as individuals.

Matter and causality

We are, long at last, in a position to examine the connection between matter and causality. What this examination shall show is that it is a special feature of Schopenhauer's field theory—I take it that at this point I am entitled to speak of such—that it is unmistakably and overtly dynamistic in character.

According to Schopenhauer, time and space are the source of plurality and thus the principle of individuation (see especially W I, § 23), by which he seems to mean simply that time and space are something

---

[59] I am grateful to Juhani Pietarinen for pointing me out these implications of Schopenhauer's thought.

[60] W II, pp. 42–43. See also W I, p. 277.

[61] For substantial forms and individuation in scholasticism, see Des Chene, *Physiologia*, p. 54.

with regard to which things are differentiated from each other.[62] The spatio-temporal plurality of states, in turn, changes as dictated by the law of causality. Schopenhauer states this repeatedly, for instance in the following manner:

> *Every change in the material world can appear only in so far as another change has immediately preceded it*; this is the true and entire content of the law of causality.[63]

In words more explicit about what the change in questions consists of (W I, pp. 9–10):

> [T]he law of causality receives its meaning and necessity only from the fact that the essence of change does not consist in the mere variation of states or conditions themselves. On the contrary, it consists in the fact that, at the *same place in space*, there is now *one* condition or state and then *another*, and at *one* and the same point of time there is *here* this state and *there* that state. […] Thus change, i.e., variation occurring according to the causal law, always concerns a particular part of space and a particular part of time, *simultaneously* and in union. Consequently, causality unites space and time.

Moreover, and as we should by now expect, all this takes place in matter (W I, p. 10):

> [M]atter must carry within itself simultaneously the properties and qualities of time and those of space […]. It must unite within itself […] the unstable flight of time with the rigid unchangeable persistence of space[.]

So, apparently, causality is lawfulness or rule-governedness—here I think we can hear Humean echoes—we find in the way in which states of matter succeed each other in space and time. The picture resulting from the considerations thus far is, then, this: objects, i.e. things of the phenomenal world, are spatio-temporally distributed states of the material field, and the distribution takes place in a lawful manner, according to the law of causality.

---

[62] I think a much fuller doctrine of individuation can be unearthed from the pages of *The World as Will and Representation* (see the discussion on Ideas and forms above); given the distinction formulated by Hector-Neri Castañeda ("Individuation and Non-Identity: A New Look", pp. 132–133), the here presented stand would, in fact, equal answering the problem of *differentiating* things from each other, not the problem of individuation (which, for Castañeda, concerns discerning what *makes* an individual the individual it is).

[63] W II, p. 39.

But from the beginning of the first volume of Schopenhauer's main work,[64] it becomes evident that there is more than this to causality. He delineates the connection between matter and *causal efficacy* as follows:

> [M]atter is absolutely nothing but causality […]. Thus its being is acting [*Wirken*]; it is not possible to conceive for it any other being. *Only as something acting does it fill space and time*; its action on the immediate object (which is itself matter) conditions the perception in which alone it exists. The consequence of the action of every material object on another is known only in so far as the latter now acts on the immediate object in a way different from that in which it acted previously […]. Thus cause and effect are the whole essence and nature of matter, its being is its acting.[65]

So matter is causally efficacious throughout, and due to this efficacy it can be the content, the basic material, of the objects of perception.[66] Schopenhauer is happy to point out that the German word for reality, *Wirklichkeit*, is a particularly felicitous one (W I, p. 9): the basis of the phenomenal reality is formed by matter to whose nature it belongs always to act (*wirken*). He could thus hardly be more explicit about the fact that the concept of matter he operates with is not an inert one. Given that the basis of the objects of our representations is matter, it is not surprising to find him stating that "the true *being* of objects of perception is their *action*" (W I, p. 14). From this the notion of power or force is only one step away: "[E]very operative or causative thing acts by virtue of its, original, and thus eternal, i.e. timeless, power [*Kraft*]" (W II, p. 44). In short, anything that does not pass the Eleatic Stranger's test is debarred from entering the world of phenomena.[67]

Most often, force and power are classified, and with reason, as causal notions. We should, however, take heed of the fact that especially in

---

[64] Schopenhauer's views on these matters are fairly thoroughly exposed already in the *Fourfold Root*; see § 20 of that work.

[65] W I, pp. 8–9, emphasis added. See also W II, p. 305.

[66] No doubt, the connection between matter and space follows directly from the fact that the former necessarily falls under the latter; but sometimes Schopenhauer argues that were matter not spatial, it could not be causally efficacious. After the already quoted passage, "we can perhaps picture matter to ourselves without weight, but not without extension, force of repulsion, and persistence; *for it would then be without impenetrability, and consequently without space-occupation*, that is to say, without the *power of acting* [*Wirksamkeit*]" (W II, p. 308, the first emphasis added). So activity presupposes spatiality, and as "the essence of matter, as such, consists precisely in *acting*" (W II, p. 308), matter must be spatial.

[67] Cf. Morgenstern, *Schopenhauers Philosophie der Naturwissenschaft*, pp. 111–112.

the second volume of his main work, Schopenhauer is careful to distinguish causes from forces. He finds fault in what he calls "*too wide* comprehension of the concept *cause*" which has led to conflating it with that of force (W II, p. 44).[68] The crux of this criticism seems to lie in Schopenhauer's way of defining causality in terms of lawful succession of changes. Given this understanding of causality, Schopenhauer correctly keeps the two notions apart; and it does make sense to point out that "force is nevertheless what imparts to every cause its causality, in other words, the possibility of acting" (W II, p. 44). In other words, the explanation for the fact that things are causally active is found in forces. Things are causally efficacious in virtue of their intrinsic force, whereas "the law of causality" regulates the manner in which that causal efficacy is exercised in particular situations (see W II, p. 14). I think we can even detect traces of Leibnizian influences in the claim that the universal forces of nature "are the prior and presupposed conditions of all causes and effects through which their own inner being is unfolded and revealed" (W I, p. 130).

The general thrust of Schopenhauer's argumentation concerning matter, activity, causality, and so on, is toward a position in which matter and force are the fundamental ingredients in each and every phenomenon; and indeed, we find a passage that makes this as explicit as one might wish:

> Two things in nature, namely matter and the forces of nature, remain untouched by the chain of causality which is endless in both directions. These two are the conditions of causality, whereas everything else is conditioned by it. For the one (matter) is that *in* which the states and their changes appear; the other (the forces of nature) that *by virtue of* which alone they are able to appear at all.[69]

Here it all comes together really: matter and force are the basic constituents of the phenomenal realm, and inextricably intertwined. The first is causally efficacious throughout because of the latter; the latter has a place in the phenomenal world because of the former.[70] It is thus wholly

---

[68] See also *On the Fourfold Root of the Principle of Sufficient Reason*, pp. 68–69.

[69] W II, p. 44.

[70] Julian Young argues that matter is, for Schopenhauer, "identical with force" (*Willing and Unwilling*, p. 43), and that "the ordinary world of commonsense is, Schopenhauer holds, an appearance of a reality of disembodied forces", "the 'seats' of the ultimate forces in nature" being "extensionless points" (*ibid.*, p. 45). Morgenstern (*Schopenhauers Philosophie der Naturwissenschaft*, pp. 109, 122–125) claims that Schopenhauer attempts to reduce the concept of matter to that of causality. But even

appropriate to talk about "the *fundamental forces of matter*" (W II, p. 14). To be material is to be causally efficacious in virtue of one's force.

Schopenhauer's descriptions of the way in which the objectifications of different levels relate to each other can be, I think, quite nicely explicated within a field theoretical interpretation. The phenomenal world of forces is hierarchically structured according to Platonic Ideas, the basic level being formed by the universal forces of nature:

> The most universal forces of nature exhibit themselves as the lowest grade of the will's objectification. In part they appear in all matter without exception, as gravity and impenetrability, and in part have shared out among themselves the matter generally met with. Thus some forces rule over this piece of matter, others over that, and this constitutes their specific difference, as rigidity, fluidity, elasticity, electricity, magnetism, chemical properties, and qualities of every kind.[71]

The picture Schopenhauer paints before our eyes can be interpreted as a spatio-temporal field in which forces, by resisting each other, occupy varying regions of matter. Not only the original forces of nature but everything in nature behaves in a force-like manner, analogously to the ultimate forces of nature (see W I, pp. 145, 154), so that we find contest everywhere:

> Thus everywhere in nature we see contest, struggle, and the fluctuation of victory[.] […] Every grade of the will's objectification fights for the matter, the space, and the time of another. Persistent matter must constantly change the form, since, under the guidance of causality, mechanical, physical, chemical, and organic phenomena, eagerly striving to appear, snatch the matter from one another […]. This contest can be followed through the whole of nature; indeed, only through it does nature exist […]. This universal conflict is to be seen most clearly in the animal kingdom.[72]

The idea is thus that persistent matter, with regard to which all objects of perception are of one piece, changes its form, or state, through innumerable contests. Schopenhauer suggests that out of the conflicts of the lower grades of objectification arise the phenomena of higher

---

though Schopenhauer says that "Kant (after the example of Priestley) has quite rightly reduced matter to forces" (W II, p. 303), he also shows reluctance towards a reductionist position concerning matter; in many passages (see especially W II, pp. 14, 42–44) his view obviously is that there must be *something* (independent from forces or causal efficacy) in which forces inhere.

[71] W I, p. 130.

[72] W I, pp. 146–147.

ideas: plants, animals, and human beings. But not only are the objectifications of a certain grade in conflict with each other, there are also inter-level contests between objectifications of different grades. The objectifications of higher Ideas must continuously struggle to keep those of lower Ideas—ultimately the original forces of nature that have "ghostly omnipresence" (W I, p. 133) and in whom all causal explanations are ultimately anchored even though Schopenhauer is decidedly against explaining higher phenomena by reducing them to lower ones (see e.g. W I, § 27)—subdued in order for them to continue to exist, i.e. to keep a certain part of matter in a state corresponding to their higher Idea (W I, pp. 144–146). It thus seems that each Idea as the unifying principle bestows upon its objectification its own, distinctive kind of striving force to maintain the objectification (i.e. a certain way the material field is modified) in existence. This explains, I take it, at least in part why there is also harmony in the world (see W I, § 28).

To end this discussion, we can examine a couple of features of Schopenhauer's thought that appear rather understandable on the present interpretation. Janaway writes, "[i]t is not clear why Schopenhauer thinks that atoms are 'fictions'".[73] Now, Schopenhauer surely is firmly against any kind of atomism. He holds that "[t]he atom is without reality" (W II, p. 51), and at least two reasons for this can be found. First, in atomistic theories "all processes of inorganic nature are reduced to mechanism, to thrust and counter-thrust" (W II, p. 316), and this, of course, goes against his view of forces as irreducible basis of natural phenomena.[74] Second, and even more importantly, Schopenhauer holds that "[m]atter is infinitely divisible" and that "matter is […] a *continuum* […]; it is therefore not composed of parts that would be separated essentially by something that was not matter" (W II, p. 48); the idea here is, I think, that as the material field is one unified continuum, not built up from finite regions, there are no definite end-points (such as indivisible atoms) to the way in which it can be modified. Also the claim that "if, *per impossible*, a single being, even the most insignificant, were entirely annihilated, the whole world would inevitably be destroyed with it" (W I, pp. 128–129), is what we should expect given the field

[73] Janaway, *Self and World in Schopenhauer's Philosophy*, p. 178.
[74] Janaway (*Self and World in Schopenhauer's Philosophy*, pp. 178–179) observes that reductionism is one reason for Schopenhauer to object materialism.

theoretical interpretation:[75] permanent going out of existence of any part of the field, which is a unity, is incomprehensible.

Epilogue: Schopenhauer's dynamism and Nietzsche

This discussion has shown, I hope, that not only is Schopenhauer's view of the basic nature of reality intrinsically dynamistic, amounting to *a monistic vision of will as aimless striving*, but also that his theory of the phenomenal world can be fruitfully understood as having in its heart a view of *the world as a field in which things are centres of causal efficacy, individuated by Platonic Ideas or forms, that fight over the possession of matter*. I would thus argue that it is well-taken to label Schopenhauer a twofold dynamist, so crucial a role dynamic concepts play in his theories of both the noumenal and the phenomenal.

Given these aspects of Schopenhauer's philosophy, it is interesting to recall that a thinker very much influenced by it, Friedrich Nietzsche (1844–1900), puts forward claims—most notably in his unpublished manuscripts—in which he champions a "dynamic interpretation of the world"[76] on which "no things remain but only dynamic quanta, in a relation of tension to all other dynamic quanta".[77] Reconstructing the obviously extremely dynamistic theory Nietzsche is sketching out in his *Nachlass* would, of course, require a separate study of its own; but this strongly suggests that the metaphysical ideas discussed in this book do not find their end-point in Schopenhauer's elaborately expressed dynamistic theory of the world, but can be traced at least to Nietzsche. Indeed, many of the preceding chapters in this book have shown how the view of the world as having some kind of power as its basis has been traditionally allied with the idea that this power, or the reality it brings about, is fundamentally rational or intelligible in character. Now, we really should appreciate the fact that Schopenhauer's rather stark view of life as a combative affair leads to the denial of this alliance: although not much can be said about the noumenon, it does seem in many ways

---

[75] Cf. Spinoza: "[I]f one part of matter were to be annihilated, the whole of Extension would also vanish at the same time" (Letter 4, to Oldenburg; *The Letters*, p. 69). For the argument of how this backs up the field metaphysical interpretation of Spinoza's doctrine of extension, see Bennett, *A Study of Spinoza's* Ethics, pp. 97–101.

[76] *The Will to Power*, § 618.

[77] *The Will to Power*, § 635.

apposite to hold, as Magee does, that Schopenhauer "was possessed by the idea that there is something inherently evil, monstrous, wicked about the ultimate force that constitutes the world".[78] Indeed, it seems to me that it is precisely here that Schopenhauer has exerted the greatest influence on our intellectual climate:[79] *he alters the moral standing towards dynamistic metaphysics* by claiming that the fundamental dynamic factor underlying everything is far removed from rationality, intelligibility, design, or providence. The world in itself is purposeless striving that manifests itself as a field of constant contest with no intrinsic value; the proper thing left for us to do is the unfaltering acknowledgement of this. This moral repositioning, it seems to me, is something that forms an important background for Nietzsche's thought.[80]

[78] Magee, *The Philosophy of Schopenhauer*, p. 146.

[79] As Magee (*ibid.*, p. 154) notes, "Schopenhauer's world-view is unmistakably 'modern'", prefiguring humanist existentialism.

[80] I would like to thank Juhani Pietarinen and Olli Koistinen for many helpful comments on this essay. Finally, I would like to acknowledge that the work on this paper was supported by Jenny and Antti Wihuri Foundation.

BIBLIOGRAPHY

Adams, Robert Merrihew. *Leibniz: Determinist, Theist, Idealist*. New York: Oxford University Press, 1994.

Alanen, Lilli. *Descartes's Concept of Mind*. Cambridge, MA: Harvard University Press, 2003.

Alexandra, Andrew. "Should Hobbes's State of Nature be Represented as a Prisoner's Dilemma?" *The Southern Journal of Philosophy* 30 (1992): 1–16.

Allison, Henry E. *Kant's Theory of Freedom.* Cambridge: Cambridge University Press, 1998.

——. *Kant's Transcendental Idealism: An Interpretation and Defense*. Revised and Enlarged Edition. New Haven: Yale University Press, 2004.

Anselm of Canterbury. *Lambeth Fragments*. In *Memorials of St. Anselm*, edited by R. W. Southern and F. S. Schmitt. London: Oxford University Press, 1969.

Armstrong, A. H. " 'Emanation' in Plotinus." *Mind* 46 (1937): 61–66.

Augustinus. *De spiritu et littera.* Edited by C. F. Urba and J. Zycha. Leipzig: G. Freytag, 1913.

Barbone, Steven. "What Counts as an Individual for Spinoza?" In *Spinoza: Metaphysical Themes*, edited by O. Koistinen and J. Biro, 89–112. New York: Oxford University Press, 2002.

Barry, Brian. *Political Argument.* London: Routledge and Kegan Paul, 1965.

Bennett, Jonathan. *A Study of Spinoza's* Ethics. Cambridge: Cambridge University Press, 1984.

——. "Spinoza's Metaphysics." In *The Cambridge Companion to Spinoza*, edited by D. Garrett, 61–88. Cambridge: Cambridge University Press, 1996.

——. *Learning from Six Philosophers: Descartes, Spinoza, Leibniz, Locke, Berkeley, Hume* I. Oxford: Clarendon Press, 2001.

Bernstein, Howard R. "*Conatus*, Hobbes, and the Young Leibniz." *Studies in History and Philosophy of Science* 11 (1980): 25–37.

Bobzien, Susanne. *Determinism and Freedom in Stoic Philosophy*. Oxford: Oxford University Press, 1998.

——. "Chrysippus' Theory of Causes." In *Topics in Stoic Philosophy*, edited by K. Ierodiakonou. Oxford: Oxford University Press, 1999.

Boethius. *The Consolation of Philosophy.* Translated by S. J. Tester. Cambridge, MA: Harvard University Press, 1973.

Bove, Laurent. *La stratégie du conatus. Affirmation et résistance chez Spinoza*. Paris: Vrin, 1996.

Brandt, Daniel. "Über den Willen in der Natur—Parallelen zwischen dem Denken Schopenhauers und der modernen Physik." *Schopenhauer Jahrbuch* 77 (1996): 261–272.

Brower, Jeffrey. "Aquinas's Metaphysics of Modality: A Reply to Leftow." *The Modern Schoolman* 83 (2005): 201–212.

Brown, Lesley. "Innovation and Continuity. The Battle of Gods and Giants, *Sophist* 245–249." In *Method in Ancient Philosophy*, edited by J. Gentzler, 181–207. Oxford: Clarendon University Press, 1998.

——. "Being in the *Sophist*: A Syntactical Enquiry." In *Plato 1: Metaphysics and Epistemology*, edited by G. Fine, 455–478. New York: Oxford University Press, 1999.

Carriero, John. "Spinoza on Final Causality." In *Oxford Studies in Early Modern Philosophy* II, edited by D. Garber and S. Nadler, 105–147. Oxford: Clarendon Press, 2005.

Castañeda, Hector-Neri. "Individuation and Non-Identity: A New Look." *American Philosophical Quarterly* 12 (1975): 131–140.
Cicero. *Academica*. Edited by O. Plasberg. Leipzig: Teubner, 1922 (reprint Stuttgart 1966).
——. *De Natura Deorum*. Edited by W. Ax. Leipzig: Teubner, 1961.
Clatterbaugh, Kenneth. *The Causation Debate in Modern Philosophy 1637–1739*. London: Routledge, 1999.
Cleomedes. *Cleomedes' Lectures on Astronomy: A Translation of* The Heavens. With an Introduction and Commentary by A. C. Bowen and R. B. Todd. Berkeley: University of California Press, 2004.
Cornford, Francis M. *Plato's Cosmology: The* Timaeus *of Plato*. Indianapolis: Hackett, 1997.
——. *Plato's Theory of Knowledge. The* Theaetetus *and the* Sophist. New York: Dover Publications, 2003.
Corrigan, Kevin. "Essence and Existence in the *Enneads*." In *The Cambridge Companion to Plotinus*, edited by L. P. Gerson, 105–129. Cambridge: Cambridge University Press, 1996.
Cottingham, John. *Descartes*. Oxford: Blackwell, 1986.
——. "Cartesian Dualism: Theology, Metaphysics, and Science." In *The Cambridge Companion to Descartes*, edited by J. Cottingham, 236–257. Cambridge: Cambridge University Press, 1992.
Curley, Edwin. *Behind the Geometrical Method: A Reading of Spinoza's* Ethics. Princeton: Princeton University Press, 1988.
Deleuze, Gilles. *Expressionism in Philosophy: Spinoza*. Translated by M. Joughin. New York: Zone Books, 1997.
Della Rocca, Michael. "Spinoza's Metaphysical Psychology." In *The Cambridge Companion to Spinoza*, edited by D. Garrett, 192–266. Cambridge: Cambridge University Press, 1996.
——. "The Power of an Idea: Spinoza's Critique of Pure Will." *Noûs* 37 (2003): 200–231.
Des Chene, Dennis. *Physiologia: Natural Philosophy in Late Aristotelian and Cartesian Thought*. Ithaca: Cornell University Press, 1996.
Diogenes Laertius. *Lives of Eminent Philosophers* I–II. Translated by R. D. Hicks. Cambridge, MA: Harvard University Press, 1925.
Dodds, E. R. "The *Parmenides* of Plato and the Origin of the Neoplatonic 'One'." *Classical Quarterly* 22 (1928): 129–142.
Donagan, Alan. "Spinoza's Proof of Immortality." In *Spinoza: A Collection of Critical Essays*, edited by M. Grene, 241–258. Notre Dame: University of Notre Dame Press, 1979.
Duin, J. J. *La doctrine de la providence dans les écrits de Siger de Brabant. Textes et étude.* Louvain: Éditions de l'Institut Supérieur de Philosophie, 1954.
Ekenberg, Tomas. "Free Will and Free Action in Anselm of Canterbury." *History of Philosophy Quarterly* 22 (2005): 301–318.
Emilsson, Eyjólfur Kjalar. *Plotinus on Intellect*. Oxford: Oxford University Press, 2007.
Eusebius. *Praeparatio evangelica* I–II. Edited by G. Dindorf. Leipzig: Teubner, 1867.
Falk, Hans-Peter. *Das Wissen in Hegels 'Wissenschaft der Logik'*. Freiburg: Alber, 1983.
Fine, Gail. "Knowledge and Belief in *Republic 5–7*." In *Plato 1: Metaphysics and Epistemology*, edited by G. Fine, 214–246. New York: Oxford University Press, 1999.
Fink, Eugen. *Hegel. Phänomenologische Interpretationen der 'Phänomenologie des Geistes'*. Frankfurt am Main: Klostermann, 1977.
Freddoso, Alfred J. "Medieval Causation and the Case against Secondary Causation in Nature." In *Divine and Human Action: Essays in the Metaphysics of Theism*, edited by T. V. Morris, 74–118. Ithaca: Cornell University Press, 1988.
Frede, Michael. "The Original Notion of Cause." In Michael Frede, *Essays in Ancient Philosophy*, 125–150. Oxford: Oxford University Press, 1987.

——. "Observations on Perception in Plato's Later Dialogues." In *Plato 1: Metaphysics and Epistemology*, edited by G. Fine, 377–383. New York: Oxford University Press, 1999.
Furley, David. "Cosmology." In *The Cambridge History of Hellenistic Philosophy*, edited by K. Algra et al., 412–451. Cambridge: Cambridge University Press, 1999.
Gabbey, Alan. "Force and Inertia in Seventeenth-Century Dynamics." *Studies in History and Philosophy of Science* 2 (1971): 1–67.
——. "Force and Inertia in the Seventeenth Century: Descartes and Newton." In *Descartes: Philosophy, Mathematics and Physics*, edited by S. Gaukroger, 230–320. Brighton: The Harvester Press, 1980.
Gadamer, Hans-Georg. "Hegel's 'Inverted World'." In *G. W. F. Hegel. Critical Assessments* III, edited by R. Stern, 131–147. London: Routledge, 1993.
Galen. *De methodo medendi*. In *Galeni Opera Omnia* X, edited by C. G. Kühn. Leipzig: 1825 (reprinted Hildesheim: 1965).
——. *On the Doctrines of Hippocrates and Plato*. In *Corpus Medicorum Graecorum* V, 4, 1, 2, translated by P. de Lacy. Berlin: 1978–80.
——. *The Therapeutic Method: Books 1 & 2 (De methodo medendi)*. Edited and translated by R. J. Hankinson. Oxford: Clarendon Press, 1991.
Garber, Daniel. "Leibniz and the Foundations of Physics: The Middle Years." In *The Natural Philosophy of Leibniz*, edited by K. Okruhlik and J. R. Brown, 27–130. Dordrecht: Reidel, 1985.
——. *Descartes' Metaphysical Physics*. Chicago: University of Chicago Press, 1992.
——. "Descartes and Spinoza on Persistence and Conatus." *Studia Spinozana* 10 (1994): 43–67.
——. *Descartes Embodied: Reading Cartesian Philosophy through Cartesian Science*. New York: Cambridge University Press, 2001.
Garrett, Don. "Spinoza's Necessitarianism." In *God and Nature. Spinoza's Metaphysics*, edited by Y. Yovel, 191–218. Leiden: E. J. Brill, 1991.
——. "Teleology in Spinoza and Early Modern Rationalism." In *New Essays on the Rationalists*, edited by R. J. Gennaro and C. Huenemann, 310–335. New York: Oxford University Press, 1999.
——. "Spinoza's *Conatus* Argument." In *Spinoza: Metaphysical Themes*, edited by O. Koistinen and J. Biro, 127–158. New York: Oxford University Press, 2002.
——. "Representation and Consciousness in Spinoza's Naturalistic Theory of the Imagination." In *Interpreting Spinoza: Critical Essays*, edited by C. Huenemann, 4–25. Cambridge: Cambridge University Press, 2008.
Gauthier, David. *The Logic of Leviathan: The Moral and Political Theory of Thomas Hobbes*. Oxford: Blackwell, 1978.
Gerson, Lloyd P. *Plotinus*. London: Routledge, 1994.
Gorham, Geoffrey. "Cartesian Causation: Continuous, Instantaneous, Overdetermined." *Journal of the History of Philosophy* 42 (2004): 389–423.
Gueroult, Martial. *Spinoza I. Dieu*. Hildesheim: Olms, 1968.
——. *Descartes' Philosophy Interpreted According to the Order of Reasons* I. Translated by R. Ariew. Minneapolis: University of Minnesota Press, 1984.
Guyer, Paul and Henry Allison. "Dialogue: Paul Guyer and Henry Allison on Allison's *Kant's Theory of Taste*." In *Aesthetics and Cognition in Kant's Critical Philosophy*, edited by R. Kukla, 111–137. New York: Cambridge University Press, 2006.
Hadot, Pierre. *Porphyre et Victorinus* I. Paris: Études augustiniennes, 1968.
Hahm, David E. *The Origins of Stoic Cosmology*. Columbus: Ohio State University Press, 1977.
——. "Self-Motion in Stoic Philosophy." In *Self-Motion. From Aristotle to Newton*, edited by M. L. Gill and J. G. Lennox, 175–225. Princeton: Princeton University Press, 1994.
Hall, Roland. "The Nature of the Will and its Place in Schopenhauer's Philosophy." *Schopenhauer Jahrbuch* 76 (1995): 73–89.

Hamlyn, D. W. *Schopenhauer. The Arguments of Philosophers*. London: Routledge and Kegan Paul, 1980.
Hampton, Jean. *Hobbes and the Social Contract Tradition*. New York: Cambridge University Press, 1986.
Hart, W. D. *The Engines of the Soul.* Cambridge: Cambridge University Press, 1988.
Hatfield, Gary. "Force (God) in Descartes' Physics." *Studies in the History and Philosophy of Science* 10 (1979): 113–140.
——. "Descartes's Physiology and its Relation to His Psychology." In *The Cambridge Companion to Descartes*, edited by J. Cottingham, 335–370. Cambridge: Cambridge University Press, 1992.
Hattab, Helen. "Concurrence or Divergence? Reconciling Descartes's Physics with his Metaphysics." *Journal of the History of Philosophy* 45 (2007): 49–78.
Hegel, Georg Wilhelm Friedrich. *Briefe von und an Hegel* I: 1785–1812. Edited by J. Hoffmeister. Hamburg: Meiner, 1952.
——. *Hegel's Lectures on the History of Philosophy* III. Translated by E. S. Haldane and F. H. Simson. London: Routledge and Kegan Paul, 1974.
——. *Hegel's Philosophy of Nature* I–III. Edited by M. J. Petry. London: George Allen and Unwin, 1970.
——. *Jenaer Schriften 1801–1807* (*Werke* II). Edited by E. Moldenhauer and K. M. Michel. Frankfurt am Main: Suhrkamp, 1986.
——. *The Logic of Hegel*. Translated from the *Encyclopaedia of the Philosophical Sciences* by W. Wallace. Oxford: Oxford University Press, 1959.
——. *The Philosophy of History*. Translated by J. Sibree. New York: Dover, 1956.
——. *Vorlesungen über die Philosophie der Geschichte* (*Werke* XII). Edited by E. Moldenhauer and K. M. Michel. Frankfurt am Main: Suhrkamp, 1986.
——. *Wissenschaft der Logik* II (*Werke* VI). Edited by E. Moldenhauer and K. M. Michel. Frankfurt am Main: Suhrkamp, 1986.
Henry, Desmond Paul. "Remarks on Saint Anselm's Treatment of Possibility." In *Spicilegium Beccense 1: Congrès international du IXe centenaire de l'arrivée d'Anselme au Bec*, 19–22. Paris: Vrin, 1959.
Herder, Johann Gottfried. "Gott. Einige Gespräche über Spinoza's System nebst Shaftesbury's Naturhymnus." In *Herders sämmtliche Werke* XVI, edited by B. Suphan. Berlin: Weidmannsche Buchhandlung, 1887.
Hobbes, Thomas. *Short Tract on First Principles*. In *The Elements of Law* (appendix 1), edited by F. Tönnies. Cambridge: Cambridge University Press, 1928.
——. *The Correspondence of Thomas Hobbes* I–II. Edited by N. Malcolm. Oxford: Clarendon Press, 1994.
——. *Tractatus Opticus*. In *The Elements of Law* (appendix 2), edited by F. Tönnies. Cambridge: Cambridge University Press, 1928.
Hoffman, Paul. "The Unity of Descartes's Man." *The Philosophical Review* 95 (1986): 339–370.
——. "Cartesian Passions and Cartesian Dualism." *Pacific Philosophical Quarterly* 71 (1990): 310–333.
Holladay, April. "Expanding Space." http://www.wonderquest.com/ExpandingUniverse.htm (accessed 2000).
Holopainen, Toivo J. *Dialectic and Theology in the Eleventh Century*. Leiden: E. J. Brill, 1996.
——. "Peter Damian." In *The Stanford Encyclopedia of Philosophy*, edited by E. N. Zalta (Spring 2008 Edition), http://plato.stanford.edu/archives/spr2008/entries/peterdamian/.
Huenemann, Charles. "The Necessity of Finite Modes and Geometrical Containment in Spinoza's Metaphysics." In *New Essays on the Rationalists*, edited by R. J. Gennaro and C. Huenemann, 224–240. New York: Oxford University Press, 1999.
Hume, David. *A Treatise of Human Nature*. Edited by L. A. Selby-Bigge. Oxford: Clarendon Press, 1990.

——. *An Enquiry concerning Human Understanding*. Edited by T. L. Beauchamp. Oxford: Oxford University Press, 2006.
Hyppolite, Jean. *Genèse et structure de la Phénoménologie de l'Esprit de Hegel*. Paris: Aubier Montaigne, 1967.
James, Susan. *Passion and Action: The Emotions in Seventeenth-Century Philosophy*. Oxford: Oxford University Press, 1997.
Jammer, Max. *Concepts of Force: A Study in the Foundations of Dynamics*. Mineola: Dover, 1999.
Janaway, Christopher. *Self and World in Schopenhauer's Philosophy*. Oxford: Clarendon Press, 1989.
——. "Will and Nature." In *The Cambridge Companion to Schopenhauer*, edited by C. Janaway, 138–170. Cambridge: Cambridge University Press, 1999.
Jaquet, Chantal. *L'unité du corps et de l'esprit. Affects, actions et passions chez Spinoza*. Paris: Presses Universitaires de France, 2004.
——. *Les expressions de la puissance d'agir chez Spinoza*. Paris: Publications de la Sorbonne, 2005.
Jesseph, Douglas. "Hobbes and the Method of Natural Science." In *The Cambridge Companion to Hobbes*, edited by T. Sorell, 86–107. Cambridge: Cambridge University Press, 1996.
——. "Hobbesian Mechanics." In *Oxford Studies in Early Modern Philosophy* III, edited by D. Garber and S. Nadler. Oxford: Clarendon Press, 2006.
Johannes Duns Scotus. *Opera Omnia IV, VI.* Edited by the Scotistic Commission (The Vatican edition). Civitas Vaticana: Typis Polyglottis Vaticanis, 1959–1963.
——. *Reportatio Parisiensis examinata I 38–44. Pariser Vorlesungen über Wissen und Kontingenz.* Edited by J. R. Söder. Freiburg: Herder, 2005.
——. *A Treatise on Potency and Act. Questions on the Metaphysics of Aristotle, Book IX.* Translated by A. B. Wolter. St. Bonaventure, NY: The Franciscan Institute, 2000.
Johansen, Thomas Kjeller. *Plato's Natural Philosophy: A Study of the* Timaeus-Critias. Cambridge: Cambridge University Press, 2004.
Kajamies, Timo. "Descartes: Libertarianist, Necessitarianist, Actualist?" *Minerva—An Internet Journal of Philosophy* 9 (2005): 53–104.
Kant, Immanuel. *A New Elucidation of the First Principles of Metaphysical Cognition* [*Nova Dilucidatio*]. In *Theoretical Philosophy 1755–1770*, translated and edited by D. Walford and R. Meerbote. Cambridge: Cambridge University Press, 2003.
——. *Attempt to Introduce the Concept of Negative Magnitudes into Philosophy*. In *Theoretical Philosophy 1755–1770*, translated and edited by D. Walford and R. Meerbote. Cambridge: Cambridge University Press, 2003.
——. *Critique of Practical Reason*. In *Practical Philosophy*, translated and edited by M. J. Gregor. Cambridge: Cambridge University Press, 2005.
——. *Critique of Pure Reason.* Translated and edited by P. Guyer and A. W. Wood. Cambridge: Cambridge University Press, 2000.
——. *Critique of the Power of Judgment*. Edited by P. Guyer, translated by P. Guyer and E. Matthews. New York: Cambridge University Press, 2000.
——. *Dreams of a Spirit-Seer Elucidated by Dreams of Metaphysics*. In *Theoretical Philosophy 1755–1770*, translated and edited by D. Walford and R. Meerbote. Cambridge: Cambridge University Press, 2003.
——. *Gedanken von der wahren Schätzung der lebendigen Kräfte.* In *Kant's gesammelte Schriften* I, edited by the Königliche Preussische Akademie der Wissenschaften. Berlin: Reimer, 1910.
——. *Groundwork of the Metaphysics of Morals*. In *Practical Philosophy*, translated and edited by M. J. Gregor. Cambridge: Cambridge University Press, 2005.
——. *Lectures on Metaphysics.* Translated and edited by K. Ameriks and S. Naragon. Cambridge: Cambridge University Press, 2001.

——. *On the Form and Principles of the Sensible and the Intelligible World* [*Inaugural Dissertation*]. In *Theoretical Philosophy 1755–1770*, translated and edited by D. Walford and R. Meerbote. Cambridge: Cambridge University Press, 2003.
——. *Opus postumum.* Translated and edited by E. Förster and M. Rosen. Cambridge: Cambridge University Press, 1995.
——. *Prolegomena to Any Future Metaphysics That Will Be Able to Come Forward as Science.* Translated by G. Hatfield. In *Theoretical Philosophy after 1781*, edited by H. Allison and P. Heath. Cambridge: Cambridge University Press.
——. *Religion within the Boundaries of Mere Reason*. In *Religion and Rational Theology*, translated and edited by A. W. Wood and G. di Giovanni. Cambridge: Cambridge University Press, 1996.
——. *The Metaphysics of Morals*. In *Practical Philosophy*, translated and edited by M. J. Gregor. Cambridge: Cambridge University Press, 2005.
——. *The Only Possible Argument in Support of a Demonstration of the Existence of God*. In *Theoretical Philosophy 1755–1770*, translated and edited by D. Walford and R. Meerbote. Cambridge: Cambridge University Press, 2003.
Kenny, Anthony. *The God of the Philosophers.* Oxford: Clarendon Press, 1979.
Kneale, Martha. "Leibniz and Spinoza on Activity." In *Leibniz: A Collection of Critical Essays*, edited by H. G. Frankfurt, 215–237. Notre Dame: University of Notre Dame Press, 1976.
Knuuttila, Simo. "Time and Modality in Scholasticism." In *Reforging the Great Chain of Being. Studies of the History of Modal Theories*, edited by S. Knuuttila, 163–257. Dordrecht: Reidel Publishing Company, 1981.
——. *Modalities in Medieval Philosophy*. London: Routledge, 1993.
——. "Anselm on Modality." In *The Cambridge Companion to Anselm*, edited by B. Davies and B. Leftow, 111–131. Cambridge: Cambridge University Press, 2004.
Koch, Anton Friedrich. "Hegel über Indexikalität und sinnliche Gewißheit." In *Indexicality and Idealism: The Self in Philosophical Perspective*, edited by A. Øfsti et al., 65–83. Paderborn: mentis, 2002.
Koistinen, Olli. "On the Consistency of Spinoza's Modal Theory." *The Southern Journal of Philosophy* 36 (1998): 61–80.
——. "Spinoza's Proof of Necessitarianism." *Philosophy and Phenomenological Research* 67 (2003): 283–310.
Koistinen, Olli and Arto Repo. "Compossibility and Being in the Same World in Leibniz's Metaphysics." *Studia Leibnitiana* 31 (1999): 196–214.
Lagerspetz, Eerik. *The Opposite Mirrors: An Essay on the Conventionalist Theory of Institutions.* Dordrecht: Kluwer, 1995.
Leftow, Brian. "Aquinas on God and Modal Truth." *The Modern Schoolman* 82 (2005): 171–200.
——. "Power, Possibilia and Non-Contradiction." *The Modern Schoolman* 82 (2005): 231–243.
Leibniz, Gottfried Wilhelm. *New Essays on Human Understanding*. Translated by P. Remnant and J. Bennett. Cambridge: Cambridge University Press, 1996.
——. *Sämtliche Schriften und Briefe* I–VII. Edited by the Deutsche Akademie der Wissenschaften. Darmstadt und Leipzig: Akademie Verlag, 1966.
Lennon, Thomas. "The Eleatic Descartes." *Journal of the History of Philosophy* 45 (2007): 29–45.
Lewis, David. "Attitudes *De Dicto* and *De Se*." In David Lewis, *Philosophical Papers* I, 133–158. New York: Oxford University Press, 1983.
Lin, Martin. "Spinoza's Metaphysics of Desire: The Demonstration of IIIP6." *Archiv für Geschichte der Philosophie* 86 (2004): 21–55.
——. "Teleology and Human Action in Spinoza." *Philosophical Review* 115 (2006): 317–354.

Lloyd, A. C. "Plotinus on the Genesis of Thought and Existence." *Oxford Studies in Ancient Philosophy* 5 (1987), 155–186.
——. *The Anatomy of Neoplatonism*. Oxford: Clarendon Press, 1990.
Locke, John. *An Essay concerning Human Understanding*. London: Penguin, 1997.
Loeb, Louis E. "The Mind-Body Union, Interaction, and Subsumption." In *Early Modern Philosophy: Mind, Matter, and Metaphysics*, edited by C. Mercer and E. O'Neill, 65–85. Oxford University Press, 2005.
Lovejoy, Arthur O. *The Great Chain of Being: A Study of the History of an Idea*. New York: Harper Torchbooks, 1960.
Lycan, William G. "The Metaphysics of Possibilia." In *The Blackwell Guide to Metaphysics*, edited by R. M. Gale, 303–316. Oxford: Blackwell, 2002.
Magee, Bryan. *The Philosophy of Schopenhauer. Revised and enlarged version*. Oxford: Clarendon Press, 1997.
Marenbon, John. *The Philosophy of Peter Abelard*. Cambridge: Cambridge University Press, 1997.
Marx, Karl. *The Poverty of Philosophy*. With an Introduction by Frederick Engels. London: Martin Lawrence Limited, n. d.
Matheron, Alexandre. *Individu et communauté chez Spinoza*. Paris: Minuit, 1969.
Miller, Alexander. "Objectivity Disfigured: Mark Johnston's Missing-Explanation Argument." *Philosophy and Phenomenological Research* 60 (1995): 857–868.
Misrahi, Robert. *100 mots sur l'*Éthique *de Spinoza*. Paris: Seuil, 2005.
Molnar, George. *Powers: A Study in Metaphysics*. Oxford: Oxford University Press, 2006.
Moravcsik, J. M. E. "Being and Meaning in the *Sophist*." *Acta Philosophica Fennica* 14 (1962): 23–78.
Morgenstern, Martin. *Schopenhauers Philosophie der Naturwissenschaft. Aprioritätslehre und Methodenlehre als Grenzziehung naturwissenschaftlicher Erkenntnis*. Bonn: Bouvier, 1985.
Morris, David. "Hegel on the Life of the Understanding." *International Philosophical Quarterly* 46 (2006): 403–419.
Nemesius. *De natura hominis*. Edited by M. Morani. Leipzig: Teubner, 1987.
Nietzsche, Friedrich. *The Will to Power*. Translated by W. Kaufmann and R. J. Hollingdale. New York: Vintage, 1968.
O'Meara, Dominic J. "Hierarchical Ordering of Reality in Plotinus." In *The Cambridge Companion to Plotinus*, edited by L. P. Gerson, 66–80. Cambridge: Cambridge University Press, 1996.
O'Neill, Eileen. "Mind-Body Interaction and Metaphysical Consistency: A Defense of Descartes." *Journal of the History of Philosophy* 25 (1987): 227–245.
O'Neill, John. " 'The Same Thing Therefore Ought to Be and Ought not to Be': Anselm on Conflicting Oughts." *Heythrop Journal* 35 (1994): 312–314.
Owen, G. E. L. "Plato and Parmenides on the Timeless Present." *Monist* 50 (1966): 317–340.
Parkinson, G. H. R. "Spinoza on the Power and Freedom of Man." *Monist* 55 (1971): 527–553.
——. "Spinoza's Concept of the Rational Act." *Studia Leibnitiana Supplementa* 20 (1981): 1–19.
Pasnau, Robert. "Form, Substance, and Mechanism." *The Philosophical Review* 113 (2004): 31–88.
Peter Abelard. *Theologia 'scholarium'*. In *Corpus Christianorum Continuatio Medievalis* XIII, edited by E. M. Buytaert and C. J. Mews. Turnhout: Brepols, 1987.
Peter Damian. *De divina omnipotentia*. Edited by A. Cantin. Sources chrétiennes 191. Paris: Cerf, 1972.
Pietarinen, Juhani. "Hobbes and the Prisoners' Dilemma." In *Theory and Systems of Legal Philosophy*, edited by S. Panou et al., 213–216. Stuttgart: Franz Steiner, 1988.

——. "The Rationality of Desires in Spinoza's Ethics." In *Rationality and Irrationality (Contributions of the Austrian Ludwig Wittgenstein Society 8*), edited by B. Brogaard, 67–72. Kirchberg: Austrian L. Wittgenstein Society, 2000.
——. "Spinoza on Causal Explanation of Action." In *Realism in Action*, edited by M. Sintonen et al., 137–154. Dordrecht: Kluwer, 2003.
——. "Plato on Diversity and Stability in Nature." In *Philosophy and Biodiversity*, edited by M. Oksanen and J. Pietarinen, 85–100. New York: Cambridge University Press, 2004.
Pippin, Robert B. *Hegel's Idealism: The Satisfactions of Self-Consciousness*. Cambridge: Cambridge University Press, 1989.
Plantinga, Alvin. *The Nature of Necessity*. Oxford: Clarendon Press, 1974.
Plutarch. *On Common Conceptions*. In *Moralia* XIII*, part 2: Stoic Essays*, translated by H. Cherniss. Cambridge, MA: Harvard University Press, 1976.
——. *On Stoic Self-Contradictions*. In *Moralia* XIII*, part 2: Stoic Essays*, translated by H. Cherniss. Cambridge, MA: Harvard University Press, 1976.
——. *Reply to Colotes in Defence of the Other Philosophers*. In *Moralia* XIV, translated by B. Einarson and P. H. De Lacy. Cambridge, MA: Harvard University Press, 1967.
Posch, Thomas. "Hegel's Anti-Reductionism." *Angelaki* 10 (2005): 61–76.
Pruss, Alexander R. *The Principle of Sufficient Reason: A Reassessment*. Cambridge: Cambridge University Press, 2006.
Ps.-Plutarch [Aëtius]. *Placita.* In *Doxographi Graeci*, edited by H. Diels. Berlin: Weidmann, 1879 (reprinted Berlin: Walter de Gruyter, 1979).
Quine, W. V. *The Roots of Reference*. La Salle, IL: Open Court, 1973.
Radner, Daisie. "Rejoinder to Professors Richardson and Loeb." *Journal of the History of Philosophy* 23 (1985): 232–236.
——. *Malebranche: A Study of a Cartesian System*. Assen: Van Gorcum, 1978.
Ramond, Charles. *Dictionnaire Spinoza.* Paris: Ellipses, 2007.
Rawls, John. *A Theory of Justice*. Cambridge, MA: Harvard University Press, 1971.
Raylor, Timothy. "Hobbes, Payne, and *A Short Tract on First Principles*." *The Historical Journal* 44 (2001): 29–58.
Rice, Lee C. "Action in Spinoza's Account of Affectivity." In *Desire and Affect: Spinoza as Psychologist. Papers Presented at the Third Jerusalem Conference (*Ethica *III)*, edited by Y. Yovel, 155–168. New York: Little Room Press, 1999.
Rizk, Hadi. *Comprendre Spinoza*. Paris: Armand Colin, 2006.
Roinila, Markku. *Leibniz on Rational Decision-Making*. Helsinki: Department of Philosophy, 2007.
Rorty, Amélie Oksenberg. "Descartes on Thinking with the Body." In *The Cambridge Companion to Descartes*, edited by J. Cottingham, 371–392. Cambridge: Cambridge University Press, 1992.
Rousset, Bernard. "Les implications de l'identité spinoziste de l'être et de la puissance." In *Spinoza: puissance et ontology*, edited by M. Revault d'Allones and H. Rizk, 11–24. Paris: Éditions Kimé, 1994.
Rozemond, Marleen. "Descartes on Mind-Body Interaction: What's the Problem?" *Journal of the History of Philosophy* 37 (1999): 435–467.
Rutherford, Donald. *Leibniz and the Rational Order of Nature*. Cambridge: Cambridge University Press, 1995.
——. "Leibniz on Spontaneity." In *Leibniz: Nature and Freedom*, edited by D. Rutherford and J. A. Cover, 156–180. Oxford: Oxford University Press, 2005.
Rutten, Christian. "La doctrine des deux actes dans la philosophie de Plotin." *Revue philosophique* 146 (1956): 100–106.
Ryan, Alan. "Hobbes's Political Philosophy." In *The Cambridge Companion to Hobbes*, edited by T. Sorell, 208–245. Cambridge: Cambridge University Press, 1996.
Sallis, John. *Chorology. On Beginning in Plato's* Timaeus. Bloomington: Indiana University Press, 1999.

Sambursky, Samuel. *Physics of the Stoics*. London: Routledge and Paul, 1959.
Santas, Gerasimos. "Hintikka on Knowledge and its Objects in Plato." In *Patterns in Plato's Thought*, edited by J. M. E. Moravcik, 31–51. Dordrecht: Reidel, 1973.
——. "The Form of the Good in Plato's *Republic*." In *Plato 1: Metaphysics and Epistemology*, edited by G. Fine, 247–274. New York: Oxford University Press, 1999.
Schelling, Friedrich Wilhelm Josef. *Zur Geschichte der neueren Philosophie. Münchener Vorlesungen*. Darmstadt: Wissenschaftliche Buchgesellschaft, 1959.
Schmaltz, Tad M. "Deflating Descartes's Causal Axiom." In *Oxford Studies in Early Modern Philosophy* III, edited by D. Garber and S. Nadler, 1–32. Oxford: Clarendon Press, 2006.
Schopenhauer, Arthur. *On the Fourfold Root of the Principle of Sufficient Reason*. Translated by E. F. J. Payne. La Salle: Open Court, 1974.
——. *Über den Willen in der Natur*. In *Kleinere Schriften*, Darmstadt: WBG, 1989.
Sedley, David. "Hellenistic Physics and Metaphysics." In *The Cambridge History of Hellenistic Philosophy*, edited by K. Algra et al., 353–411. Cambridge: Cambridge University Press, 1999.
Seelig, Wolfgang. "Wille und Kraft. Über Schopenhauers Willen in der Natur und seine Definition als Kraft in der Naturwissenschaft." *Schopenhauer Jahrbuch* 60 (1979): 136–147.
Sen, Amartya. "Choice, Ordering and Morality." In *Practical Reason*, edited by S. Körner, 54–67. New York: Yale University Press, 1974.
Seneca. *Naturales Questiones, Books 1–3*. Translated by T. H. Corcoran. Cambridge, MA: Harvard University Press, 1971.
——. *Ad Lucilium Epistulae Morales* I–III. With English translation by R. M. Gummere. Cambridge, MA: Harvard University Press, 1917.
——. *Dialogues and Essays*. Translated by J. Davie. Oxford: Oxford University Press, 2007.
Serene, Eileen F. "Anselm's Modal Conceptions." In *Reforging the Great Chain of Being: Studies of the History of Modal Theories*, edited by S. Knuuttila, 117–162. Dordrecht: Reidel, 1981.
Sévérac, Pascal. *Le devenir actif chez Spinoza*. Paris: Honoré Champion, 2005.
Sextus Empiricus. *Adversus Dogmaticos*. In *Sextus Empiricus Opera* II, edited by H. Mutschmann. Leipzig: Teubner, 1912–1914.
——. *Against the Logicians*. Edited and translated by R. Bett. Cambridge: Cambridge University Press, 2005.
——. *Outlines of Pyrrhonism*. Translated by R. G. Bury. Cambridge, MA.: Harvard University Press, 1933.
Simplicius. *In Aristotelis Categorias commentarium*. In *Corpus Aristotelicum Graecum* VIII, edited by C. Kalbfleisch. Berlin, 1907.
Smith, Andrew. "Eternity and Time." In *The Cambridge Companion to Plotinus*, edited by L. P. Gerson, 196–216. Cambridge: Cambridge University Press, 1996.
Snow, Dale E. and James J. Snow. "Was Schopenhauer an Idealist?" *Journal of the History of Philosophy* 29 (1991): 633–655.
Sorell, Tom. *Hobbes*. London: Routledge and Kegan Paul, 1986.
Spindler, Fredrika. *Philosophie de la puissance et determination de l'homme chez Spinoza et chez Nietzsche*. Munkedal: Glänta Produktion, 2005.
Spinoza, Baruch. *Theological-Political Treatise*. Second Edition. Translated by S. Shirley. Indianapolis: Hackett, 2001.
——. *The Letters*. Translated by S. Shirley. Indianapolis: Hackett, 1995.
Stobaeus, Joannes. *Anthologii libri duo priores qui inscribi solent Eclogae physicae et ethicae* I–II. Edited by K. Wachsmuth and O. Hense. Berlin 1884–1912 (reprinted Berlin: Weidmann, 1958).
Stoffel, Brian. "Hobbes's *Conatus* and the Roots of Character." In *Hobbes's 'Science of Natural Justice'*, edited by C. Walton and P. J. Johnson, 123–138. Martinus Nijhoff, 1987.

Stolarski, Grzegorz. *La possibilité de l'être. Un essai sur la détermination du fondement ontologique de la possibilité dans la pensée de Thomas d'Aquin*. Fribourg: Éditions Universitaires Fribourg Suisse, 2001.

Suárez, Francisco. *On the Formal Cause of Substance: Metaphysical Disputation XV*. Translated by J. Kronen and J. Reedy. Milwaukee: Marquette University Press, 2000.

——. *On Efficient Causality. Metaphysical Disputations 17, 18, and 19 (Disputationes metaphysicae)*. Translated by A. J. Freddoso. New Haven: Yale University Press, 1994.

Thomas Aquinas. *Aristotle*. On Interpretation. *Commentary by St. Thomas and Cajetan (Peri Hermeneias)*. Translated by J. T. Oesterle. Milwaukee: Marquette University Press, 1962.

——. *Commentary on Aristotle's* Metaphysics. Translated by J. P. Rowan. Notre Dame, IN: Dumb Ox Books, 1995.

——. *Compendium Theologiae*. In *Opera Omnia* XLII. Iussu Leonis XIII P. M. edita (the Leonine edition). Romae: Editori di San Tommaso, 1979.

——. *Quaestiones disputatae de veritate* II. In *Opera Omnia* XXII. Iussu Leonis XIII P. M. edita (the Leonine edition). Romae: ad Sanctae Sabinae, 1972.

——. *Summa Contra Gentiles*. In *Opera Omnia* XIII. Iussu Leonis XIII P. M. edita (the Leonine edition). Romae: Typis Riccardi Garroni, 1918.

——. *The Principles of Nature*. In *Selected Writings of St. Thomas Aquinas*, translated by R. P. Goodwin. New Jersey: Prentice Hall, 1965.

——. *The Summa Theologica* I. Translated by the Fathers of the English Dominican Province. Chicago: Encyclopaedia Britannica Inc., 1952.

Tieck, Ludwig. "Die verkehrte Welt. Ein historisches Schauspiel in fünf Aufzügen." In *Schriften* V, 283–486. Berlin: Reimer 1828.

Todd, Robert B. *Alexander of Aphrodisias on Stoic Physics: A Study of the* De mixtone (with preliminary essays, text, translation and commentary). Leiden: E. J. Brill, 1976.

Tornau, Christian. "Wissenschaft, Seele, Geist: Zur Bedeutung einer Analogie bei Plotin (*Enn*. IV 9, 5 und VI 2, 20)." *Göttinger Forum für Altertumswissenschaft* 1 (1998): 87–111.

Ullman-Margalit, Edna. *The Emergence of Norms*. Oxford: Oxford University Press, 1977.

Viljanen, Valtteri. "Field Metaphysic, Power, and Individuation in Spinoza." *The Canadian Journal of Philosophy* 37 (2007): 393–418.

——. *Spinoza's Dynamics of Being: The Concept of Power and its Role in Spinoza's Metaphysics*. Turku: University of Turku, 2007.

——. "On the Derivation and Meaning of Spinoza's *Conatus* Doctrine." In *Oxford Studies in Early Modern Philosophy* IV, edited by D. Garber and S. Nadler, 89–112. Oxford: Clarendon Press, 2008.

——. "Spinoza's Essentialist Model of Causation." *Inquiry* 51 (2008): 412–437.

Vlastos, Gregory. *Platonic Studies* (Second Edition). Princeton: Princeton University Press, 1981.

Voigt, Hans. "Wille und Energie." *Schopenhauer Jahrbuch* 51 (1970): 133–137.

Von Arnim, Hans (ed.). *Stoicorum Veterum Fragmenta* I–III. Leipzig: Teubner, 1903–1905.

Von Staden, Heinrich. *Herophilus: The Art of Medicine in Early Alexandria*. Cambridge: Cambridge University Press, 1989.

Watkins, J. W. N. "Imperfect Rationality." In *Explanation in the Behavioral Sciences*, edited by R. Borger and F. Cioffi, 167–217. Cambridge: Cambridge University Press, 1970.

Watson, Richard A. *The Downfall of Cartesianism, 1673–1712*. The Hague: Martinus Nijhoff, 1966.

Wilson, Margaret Dauler. *Descartes*. London: Routledge and Kegan Paul, 1978.

——. *Ideas and Mechanism: Essays on Early Modern Philosophy*. Princeton: Princeton University Press, 1999.
Wilson, Mark. "Field Theory, Classical." In *Routledge Encyclopedia of Philosophy* III, edited by E. Craig, 668–670. London and New York: Routledge, 1998.
Wittgenstein, Ludwig. *Tractatus logico-philosophicus.* Translated by D. F. Pears and B. F. McGuinness. London: Routledge and Kegan Paul, 1963.
Young, Julian. *Willing and Unwilling: A Study in the Philosophy of Arthur Schopenhauer.* Dordrecht: Martinus Nijhoff, 1987.
Yourgrau, Palle. *A World Without Time: The Forgotten Legacy of Gödel and Einstein.* London: Penguin, 2005.
Zac, Sylvain. *L'idée de vie dans la philosophie de Spinoza*. Paris: Presses Universitaires de France, 1963.
Zarka, Yves Charles. "First Philosophy and the Foundations of Knowledge." In *The Cambridge Companion to Hobbes*, edited by T. Sorell, 62–85. Cambridge: Cambridge University Press, 1996.

INDEX

Abelard, Peter, 4, 90, 94–97, 106–111
action, 2, 15n, 32, 91–92, 95–96, 98, 100, 102–105, 110–111, 116n, 117n, 126–128, 135–136, 138, 142, 149, 155n, 159, 163, 177–179, 183, 188–189, 194, 200–201, 217–218, 220, 224–228, 234–235, 236n, 242–249, 253, 258, 263, 265–281, 324
activity: external 4, 76–79, 81, 86; internal, 4, 76–77, 79, 81–82, 85–86; universal absolute, 301
actualism, 101, 110, 223
Adam, 106, 111
Adams, Robert, 237n, 238n, 241n, 242
affection, 37, 40–42, 45n, 151, 186, 224
agent, 8, 13, 42, 57, 67, 79–83, 85, 103, 106, 108, 110–111, 117n, 118, 124, 140, 151, 184, 186, 193–194, 210–211, 216, 218, 220, 225, 227n, 228, 243, 246, 248–249, 253–254, 262, 272, 280
air. *See* element
Alanen, Lilli, 146n
Alexander of Aphrodisias, 54n, 61, 63n, 64
Alexandra, Andrew, 208n
Allison, Henry, 265–266, 268n, 272, 277, 279n
Anaxagoras, 17
animal, 22n, 36, 37n, 46n, 53, 64–65, 67, 161, 200n, 279, 292n, 306, 309, 316n, 317, 326–327
Anselm of Canterbury, 4, 90, 98–111
antinomy, 277
apperception, 302–303
appetite, 40, 195, 197, 200, 238–239, 242
Aquinas, Thomas, 4–5, 102, 113–129, 227
Aristotelian, 2, 4–5, 64–65, 71–72, 75–77, 81, 83, 102, 113–114, 117, 120, 125, 128n, 217, 222, 227, 229, 232–234, 237–238, 242–243, 254
Aristotle, 3, 49–50, 52–53, 56, 63, 66, 71–72, 75–76, 78–79, 81–84, 90, 101, 115, 120n, 125, 128n, 227
Armstrong, A. H., 83n
Arnauld, Antoine, 131n, 132–133, 139n, 140, 149n, 154n, 180n, 233
association, 146n, 262
assurance game, 208
atomism, 328
attribute, 18n, 19n, 167, 175–176, 216, 219, 289, 317
Augustine, 89–94, 97, 102, 110
aversion, 197, 200–201
Averroes, 227n

Barbone, Steven, 213n, 218n, 226n
Barry, Brian, 206n
Bayle, Pierre, 247n, 248n
beauty, 16n, 18n, 19, 21n, 36, 48, 268
behaviour, 12, 32, 43–44, 161, 192, 196n, 204–205, 210n, 267
being: eternal, 18, 210; in itself, 16–17, 26, 33; living, 2, 11–12, 14, 22–25, 29, 32, 35–44, 47, 63, 65, 78n
belief, 21n, 35, 42–43, 46, 98, 147n, 153n, 161, 284
benevolence, 89, 96, 144–145, 150
Bennett, Jonathan, 31n, 137n, 317
Bernstein, Howard R., 193n
Big Bang, 87, 307n
bodies: celestial, 35, 45; complex, 28, 30, 32; simple, 11–12, 27–32
Boëthius, 90–91, 99, 110
Bove, Laurent, 213
Bramhall, John, 190n
Brandt, Daniel, 307
Brower, Jeffrey, 114n
Brown, Leslie, 13n, 14n
Bruno, Giordano, 319
Burman, Frans, 145n, 163–164

Carriero, John, 226n
Cartesian, 6, 8, 132–135, 137, 141–142, 146, 148, 151, 153–154, 155n, 159–160, 161n, 163, 174, 184, 186, 211, 217, 222, 230–231, 233, 254, 314
Castañeda, Hector-Neri, 323n
Caterus (Johannes de Kater), 139
causa sui, 215
causal adequacy condition, 141, 146, 147n, 151–153
causation: double-aspect model of, 141, 148, 156, 159; intrasubstantial, 240;

secondary, 142, 156n, 178–179, 216; transeunt, 239, 242–243
cause: auxiliary, 32; efficient, 233; final, 239–240, 315; formal, 18, 19n, 84, 235
change, 13–14, 16, 20–21, 24–29, 34, 85, 102, 121–122, 137n, 138–140, 144, 146–147, 155–157, 165, 169, 183, 191, 193–194, 222–225, 236, 241, 245, 248–249, 251, 256–260, 264–265, 280, 291, 297, 321–323
chôra, 2, 11, 21, 25, 29, 31, 41. *See also* space
Christ, 108
Chrysippus, 49, 52–54, 60, 67–69
Cicero, 55n, 64n
circle: of the different, 38; of the same, 34–36, 38, 41
citizen, 187, 208–212
Clarke, Samuel, 232n
Cleanthes, 52, 56–57
Cleomedes, 50, 54n
Clerselier, Claude, 134
commonwealth, 7, 203–204, 209–210, 212
conatus, 7, 187, 192–196, 202–205, 210–213, 225, 235–236, 314. *See also* endeavour, *nisus*, striving
concept: complete individual, 240–241, 247
concurrentism, 156n
consolation, 68–69
contingency, 114, 123, 125–129
conversion, 77, 89
Cornford, Francis M., 15n, 23n, 30n, 31n, 33n, 35n
Corrigan, Kevin, 77n
cosmos, 2, 11–12, 19n, 21–36, 38n, 39n, 42–50, 53, 55, 58–60, 64–65, 67, 69–70
Cottingham, John, 147n, 150n, 161
Curley, Edwin, 314n

Damian, Peter, 4, 90–94, 96–97, 106, 110
definition, 219–220, 222–224
Deleuze, Gilles, 213n
deliberation, 150, 200–201
Della Rocca, Michael, 213n
Demiurge, 18–22, 30, 32, 35, 38n, 39n, 40, 44, 75, 84
Des Chene, Dennis, 227n, 322n
Descartes, René, 5–7, 9, 131–184, 187–191, 222, 223n, 230–231, 253–254, 314
desire, 37–40, 45, 132, 145, 147n, 151–152, 153n, 156–157, 161, 197–198, 200–203, 212, 249n, 268, 270, 278, 279n
determinism, 128n, 141, 221n, 252, 266, 271. *See also* overdeterminism
Didier of Monte Cassino, 90
difference, 26n, 33–34, 77n, 283, 293–300, 322
Diogenes Laertius, 49n, 50n, 54n, 59–60, 65
disposition, 62, 64, 67, 115, 143–150, 153, 156, 196n, 206n, 235, 268n, 288, 290. *See also* tendency
Donagan, Alan, 222n, 225n, 226n
double act doctrine, 4, 76–79, 83
dunamis, 2, 4, 13–15, 17, 24n, 25, 31, 42, 43n, 75, 81–82, 309. *See also* force, power, *vis*
Duns Scotus, John, 5, 114, 125–129
dynamics, 8, 75, 229, 230n, 235, 257

earth. *See* element
effort, 37, 82, 137n, 151n, 163, 236n, 249n, 313–314
Einstein, Albert, 295n
Ekenberg, Tomas, 4, 105n
Eleatic Stranger, 1, 12, 14–16, 34n, 51–52, 232n, 309
element, 2–3, 11–12, 15–16, 23, 27–32, 37n, 39, 50–51, 55–56, 58–62, 69, 77–79, 230
emanation, 4, 78–79, 87, 234, 288n
Emilsson, Eyjólfur Kjalar, 4
eminence thesis, 171–176, 180, 182
emotion, 37–38, 40, 69–70, 133, 135, 141n, 143, 145, 150–151, 153, 161, 197–198, 224–226. *See also* passion
endeavour, 7, 12, 21, 31, 34, 45, 188, 190–203, 205–206, 208–211, 244, 314. *See also conatus*, *nisus*, striving
energeia, 4, 76, 78, 83, 85
energy, 132n, 147n, 153n, 160, 231n, 301, 307n
entelecheia, 235, 238, 240
Epicurean, 49, 68
Epicurus, 268n
essence: actual, 24, 33, 217; divine, 116n, 215–216, 289; individual, 257; noumenal, 317; rational, 2, 36. *See also* nature
ethics, 49–51, 54, 67–70, 105, 187, 211, 226
Euler, Leonhard, 254

Eve, 111
evil, 1, 69, 89–90, 92–94, 201, 203n, 329
experience, 9, 21n, 22n, 131, 143, 145, 147n, 157, 160, 165, 180, 198–199, 261, 263–264, 268, 270, 276, 280n, 288n, 293, 295n, 300, 306, 316, 318
expression, 145, 156, 211, 217, 288, 290, 301, 314
extension, 8, 31n, 54, 74, 131–132, 134–136, 146n, 163, 167, 170, 193n, 231, 235, 241–242, 254, 257, 317, 319, 324n, 328n. *See also* space

Falk, Hans-Peter, 303n
Fermat, Pierre de, 138
field metaphysic, 31n, 317, 328n
Fine, Gail, 19n
Fink, Eugen, 299n
fire. *See* element
Flavius Marcellinus, 97
force: active, 163–164, 235n, 236–237, 240, 251–252, 255; derivative, 236–237, 241–242, 266; essential, 253, 255; external, 149, 278, 280–281; inherent, 231; intrinsic, 325; irrational, 2; motive, 230, 231n, 236, 255, 266; moving, 142, 251; natural, *see* force of nature; of law, 273n; of nature, 9, 294, 306, 309–312, 316–317, 325–326; original, 306n, 309, 311, 326–327; passive, 2, 236–237, 252; primitive, 236–237, 240–242, 257, 259; substantial, 239, 257; supersensible, 283, 295–296. *See also dunamis*, power, *vis*
form: actual, 23–24, 26, 30–31, 33, 44; eternal, 25, 321; geometrical, 27, 30–31; ideal, 12–13, 16, 20, 22–23, 27, 30–33, 42, 44n, 45; Platonic, 11, 15, 17, 18; substantial, 8, 186, 232–238, 240, 254, 322
Freddoso, Alfred, 216n, 234
freedom, 2, 4–5, 8, 47, 48n, 96–103, 105–106, 108, 111, 125–126, 128, 150–151, 153, 180, 187, 195, 226, 252–253, 266–281
Freud, Sigmund, 147n
friction, 230
function, 2, 24, 40
Furley, David, 57n, 65n

Gabbey, Alan, 210
Galen, 54n, 69, 70n
Garber, Daniel, 135n, 136n, 139n, 157–158, 159n, 160n, 190n, 233, 237–238
Garrett, Don, 213n, 214, 217, 219n, 220n, 221n
Gassendi, Pierre, 132, 134
Gauthier, David, 208n
generalization, 43–44, 146n, 205, 255
geometry, 125n, 199, 203
Gerson, Lloyd P., 83n
Geulincx, Arnold, 184
God, 4–8, 23n, 51, 75, 78n, 89–99, 105–111, 114–129, 131–133, 136–142, 144–145, 150, 152–153, 155–161, 164–168, 172–184, 186–187, 189–192, 202, 210–211, 214–225, 227–229, 232, 235–236, 239–240, 243–244, 246–248, 250, 254, 257, 260, 265, 269, 272, 277, 289, 301–302, 314
the Good, 18–19, 24n, 39, 44, 72, 74, 76n, 77n
goodness, 4, 18–19, 24, 73, 94–98, 235n, 150, 156n
Gorham, Geoffrey, 156n
grace, 90, 100, 105–106, 111n, 153n, 315
gravitation, 232n, 258, 265, 292, 294, 310, 326
ground, 256–261, 269, 273, 275–276, 288, 289n, 291–295, 300–301, 313, 315. *See also ratio*
Gueroult, Martial, 173n
Guyer, Paul, 268n

habit, 152n, 195–196
Hadot, Pierre, 83n
Hahm, David E., 64n
Hall, Roland, 306
Hamlyn, D. W., 307n, 311n, 316n
Hampton, Jean, 208n
happiness, 2, 8, 44, 47, 201–203, 207, 212, 226
harmony, 11, 35, 40, 45–46, 48, 212, 247–248, 265, 327; pre-established, 246, 257, 262
Hart, W. D., 147n, 153n, 160
Hatfield, Gary, 135n, 161, 177, 179
Hattab, Helen, 156n
Hegel, Georg Wilhelm Friedrich, 9–10, 213, 283–304
Henry, Desmond Paul, 107n
Heraclitus, 52
Herder, Johann Gottfried, 289
Hippocrates, 15
Hobbes, Thomas, 7, 9, 185–212, 243

Hoffman, Paul, 155n, 173n
Holopainen, Toivo, 93
Huenemann, Charles, 214n
Hume, David, 262–264, 287, 292n
hypothesis, 45, 46n, 74, 307
Hyppolite, Jean, 292n

idea: 21, 47, 74, 83, 116n, 119, 122, 143, 147n, 148, 159, 164, 170, 175–176, 182, 243–244, 269, 271, 273–277, 279, 287, 301; adequate, 226; clear and distinct, 131, 146n; Platonic, 6, 74, 321–322, 326–328
idealism: 8, 229, 238, 242, 250, 283, 298–299, 318; transcendental, 277n, 318
identity, 20, 33–34, 77n, 187, 195–198, 211, 225, 241, 257n, 260–261, 296, 302–303, 316n, 323n
illumination, 4, 78, 285n
image, 22–23, 25, 30, 42, 44n, 45, 46n, 78–79, 81–84, 150, 180, 198–200, 208
imagination, 121–122, 187n, 189, 235, 242
imitation, 12, 30n
immaterial, 1, 3, 15, 17, 35, 38, 133, 142, 255
immortality, 47–48, 277n
impenetrability, 237, 261, 263, 310, 319, 324n, 326
impulse, 8, 64, 70, 136n, 253, 270, 278–280, 309
independence, 171, 173–176, 180, 229, 258, 271n, 279
individuation, 74, 322, 323n
inertia, 6, 190n, 237–238
infinity, 1, 6, 9, 11–12, 19, 23n, 36, 119, 140n, 145, 152, 167, 175, 180, 190–192, 215–217, 219, 221, 224, 226n, 229, 240, 242, 250, 283, 295, 300–303, 306, 320, 327
inherence, 7, 74, 107, 132, 170–175, 226, 257n, 259, 288, 290, 302–303, 326n
intellect, 4, 23n, 45n, 72–73, 75, 77–79, 86–87, 124, 127, 128n, 129n, 131, 144–145, 149–151, 219, 221, 278–279, 318
interaction: body-body, 39n, 132, 139–142, 190, 198, 239, 255; body-mind, 142–149; mind-body, 6, 12, 132–134, 149–159, 184, 255
intuition, 96, 139, 273, 275, 302, 319

James, Susan, 227n
Jammer, Max, 231n
Janaway, Christopher, 306n, 307n, 308n, 313, 317n, 318n, 320–321, 327
Jaquet, Chantal, 213n
Jesseph, Douglas, 190n, 194n
Johansen, Thomas Kjeller, 19n, 31n, 32n, 35n, 38n, 39n, 45n
joy, 41, 145, 147n, 161n, 203, 226

Kajamies, Timo, 6–7, 223n
Kant, Immanuel, 8–9, 147n, 161n, 251–281, 302–303, 308, 326n
Kenny, Anthony, 96
kinematics, 230n
kingdom: 326; of grace, 315; of nature, 315
Kneale, Martha, 220n, 245n, 248n
knowledge, 13, 18, 21n, 26n, 37, 42–48, 68, 84, 124, 144, 150, 153n, 160, 175, 180–181, 185, 187n, 198–199, 218, 234, 261, 265, 274, 283, 285, 298, 303, 305, 306n, 308–309
Knuuttila, Simo, 102–104, 106, 128n, 129n
Koch, Anton Friedrich, 285n
Koistinen, Olli, 10, 147n, 161n, 221n, 247n, 249n

Lagerspetz, Eerik, 208n
Lagrange, Joseph-Louis, 254
Laiho, Hemmo, 8
law: bridge, 146n, 152n, 161; conservation, 153, 157–158, 163, 178–179, 182, 184; Leibniz's, 286; moral; 267–268, 270, 273n, 275–276, 280; of gravitation; 258, 292; of motion, 137n, 138, 157–159, 163, 166, 169, 186, 189–192, 199, 204–206, 211, 229, 233; of the series, 240
Leftow, Brian, 114n, 122n, 123
Leibniz, Gottfried Wilhelm, 5–6, 8–9, 137n, 193n, 194, 196n, 197n, 211, 223, 229–250, 253, 260, 265, 286, 310, 314–315
Lennon, Thomas, 173n
Lewis, David, 113
liberty: 200, 201n, 204; of indifference, 96, 110–111; of spontaneity 111. *See also* freedom, right
life, 34n, 41, 44, 47, 48n, 67, 70, 76–77, 84, 97, 146, 186, 192, 197n, 201, 203–211, 226, 241, 252, 295, 296n, 298, 300, 309, 315n, 328
Lin, Martin, 214n, 220n
Lloyd, A. C., 83n
Locke, John, 286
Løkke, Håvard, 2–3

Lord Shaftesbury (Anthony Ashley Cooper), 268n
Lovejoy, Arthur O., 17n, 19n
Lycan, William G., 223n

Magee, Bryan, 306–307, 316n, 321n, 329
Malebranche, Nicolas, 184, 240
Marx, Karl, 302n
Matheron, Alexandre, 226n
matter, 3–6, 8–9, 23, 51, 55n, 57–60, 63–67, 69, 73–74, 76–78, 82, 84, 86–87, 117n, 122, 139, 147n, 158n, 160, 164–166, 172, 177–178, 231, 234, 238, 244, 254, 255n, 261, 307, 314, 316n, 317–328; prime, 122, 236–238
Megarian, 101
Mersenne, Marin, 138n, 165n, 179n, 188n, 189
Mesland, Denis, 142, 143n, 144, 150n
mixture, 2, 58, 60, 63–64
mode, 18, 23n, 119, 122, 132–133, 137, 145, 155n, 159, 165–167, 169–170, 172–174, 178, 180–182, 219, 220n, 221, 254, 286, 289. *See also* property, quality
monad, 8, 193n, 211, 237–242, 243n, 246, 248, 250, 310
morality, 253, 266, 268–269, 271, 273, 276, 280
Moravcsik, J. M. E., 13n
More, Henry, 133, 139, 154–155, 158–160
Morgenstern, Martin, 318n, 320n, 325n
Morris, David, 299n
motion: beginning of, 188–191, 195; law of, 137n, 138, 157–159, 163, 166, 169, 186, 189–192, 199, 204–206, 211, 229, 233; quantity of; 139, 157–158, 165–166, 169, 172, 181–182, 230–231, 253–254
movement. *See* motion
Myrdal, Peter, 248n, 249n

natural condition, 40–41
nature: essential, 133, 195, 200n, 201, 255, 309, 312, 316n; forces of, 9, 294, 306, 309–312, 316–317, 325–326; human, 47, 109, 141n, 161; inherent, 2, 25; inner, 241, 255n, 307, 309, 312–313; intrinsic, 195, 242; material, 11, 32; whole of, 6, 202n, 217, 273, 326. *See also* essence
necessitarianism, 7, 125, 220–223, 228, 289
necessity, 12, 20, 23n, 27, 29, 31–33, 37–38, 44, 46, 82–83, 107n, 123, 125–126, 127n, 128n, 141n, 196n, 201, 203, 206, 215, 219, 221–222, 264, 269, 273, 283, 288–290, 293–294, 323
Nemesius, 56, 58, 61, 63
Neoplatonism, 2–3, 9, 71, 93
Newton, Isaac, 190n, 232n, 258, 262, 265, 292
Nietzsche, Friedrich, 9, 202, 328–329
nisus, 235. *See also conatus*, endeavour, striving
noumenon, 9, 269, 274, 276, 305–307, 310–311, 315–317, 328

O'Meara, Dominic J., 72n
O'Neill, Eileen, 171, 173
O'Neill, John, 108n
observation, 26, 43, 45, 46n, 141, 199, 295, 306, 309
occasionalism, 184, 232, 234
Oksenberg Rorty, Amélie, 141n
Oldenburg, Henry 328n
omnipotence, 5, 89–90, 92–94, 96–97, 114–115, 117–120, 123, 128, 165, 175, 177–178, 216–217, 221, 223
the One, 3, 72–73, 75–79, 82–87
opposition: logical, 261; real, 261; of subject and object, 263, 299
order: beautiful (good, perfect, harmonious), 2, 11, 17–18, 19n, 38, 40, 45–46; immutable, 45; in the world (universe), 2, 7, 11, 17, 19, 21–22, 24, 27, 32, 44, 46, 64; preference ordering, 207, 208n; rational, 5, 21, 30, 44, 45n, 46n; temporal, 264
ousia, 18, 33, 34n, 77, 81. *See also* being, essence
overdeterminism, 156n. *See also* determinism
overflow, 78, 84, 87
Owen, G. E. L., 13n

paradigm, 24–25, 30, 47, 72, 78, 81, 160, 300. *See also* idea
Parkinson, G. H. R., 214n
Parmenides, 13, 84
Pasnau, Robert, 234n
passion, 32, 37–43, 45, 48n, 131–132, 134, 142, 150–151, 155n, 161n, 194, 197, 200, 203, 207, 209, 212, 217, 226–227, 235, 244–246, 314
passivity, 4–6, 8, 15n, 16, 39, 69, 218, 229, 238–239, 242–245, 248–250, 252

patient, 78, 83, 140, 193, 225, 243, 246, 248–249
perception: elementary, 43n; empirical, 318; manifold of, 263; object of, 44, 286, 324, 326; of the intellect, 150n; sense, 13, 37–38, 42–45, 74, 199; series of, 239, 241
perfection, 5, 21–22, 24, 30, 41n, 73, 77, 89, 116n, 119, 140, 144, 150, 165, 224–225, 244–245, 248, 259
persistence, 137, 144, 186, 190–191, 199, 201, 205, 210, 229, 319, 323, 324n
phenomenon, 9, 29n, 139, 226, 244, 248, 273, 277, 305–307, 310–312, 314–321, 323–326, 328
Pietarinen, Juhani, 2, 6–7, 179–182, 214n, 322n
Plantinga, Alvin, 113
Plato, 1–4, 6, 9, 11–48, 51–52, 54–56, 65, 71–75, 81–84, 95n, 212, 232n, 259n, 309, 320–321
Platonism, 71–72, 84–85, 89
pleasure, 37, 40–41, 45, 133, 197, 212, 244, 245n
Plotinus, 3–4, 71–87, 319
Plutarch, 49n, 54n, 55, 57n, 58, 61, 64, 65n, 66n, 69
pneuma, 3, 50–51, 53, 54n, 58–67, 69
Porphyry, 71n, 73, 76n
possibility: as power, 106; genuine, 101–102, 104, 106; logical, 114, 118, 121, 123, 126, 128n; of freedom, 270n, 274
potentia, 6, 7, 8–9, 90, 99, 124n, 213–215, 217–218, 222–223, 226, 289, 309. *See also dunamis, potestas*, power
potentiality, 4, 17, 85, 115, 122, 138, 227
potestas, 89, 91, 98–99, 106, 218, 226. *See also dunamis, potentia*, power
power: active, 1–9, 11–12, 13n, 15, 17, 23, 26, 32, 36–38, 39n, 41, 43, 45n, 46–47, 60, 72, 82, 115–116, 118–123, 125, 144, 159, 164, 176–180, 185–189, 191–193, 195, 197–198, 202n, 203–204, 206, 208–212, 214, 227, 238, 250, 252, 276–278; divine, 89, 90–91, 96, 114, 121, 123, 124n, 127, 144, 155, 216, 232; dualism, 1–3, 11; essential, 20; inherent, 195–196, 200n, 210–211; intrinsic, 8, 241, 310; irrational, 11–12, 35, 40; kinematist theory of, 185; monism, 1, 3–4, 8–9; of acting, 7, 15, 134, 214, 220, 224–228, 270, 318, 324n; of reason, 2, 7, 12, 17, 19, 21–25, 27, 29–41, 44–46, 187, 203, 206, 209–212; partial, 98, 100, 102–103, 109, 111; passive, 1–3, 5, 8, 11, 15–16, 27, 35–38, 40, 43, 76, 81, 86, 102n, 115, 119–120, 122, 125, 193–194, 227, 237–239; rational, 5, 11, 17, 18n, 19, 23–25, 31, 34, 36, 38, 40, 45, 125; receptive, 2, 20, 25, 34–35; will to, 202. *See also dunamis*, force, *potentia, potestas*
pressure, 41n, 47, 143, 188, 194, 205, 210
Princess Elizabeth, 132, 134, 144n, 154n, 161n
principle: active, 3, 5, 49–51, 57–60, 64–67, 69, 116n; causal reality, 7, 168, 170–172, 174–176; conservation, 140, 147n, 156, 158; of causal adequacy, 141, 146, 147n, 151–153; of co-existence, 260; of prior actuality, 82–83, 85–86; of succession, 256–259; of sufficient reason, 9, 13, 259, 288–289, 293n, 294, 311, 315, 316n, 318n, 325n; passive, 3, 50, 52, 57–58, 64, 238
prisoner's dilemma, 206–207, 208n
problem: closure, 134, 157; dissimilarity, 133, 148; duplication, 133, 156; heterogeneity, 133, 147; of change, 21, 24; of contingency, 125; of differentiation, 323n; of evil, 89; of freedom, 269; reliability, 141
property, 5, 18n, 19n, 29, 113, 115–116, 120–121, 131–132, 136, 140, 144, 147, 155, 156n, 163, 166–171, 173, 175–177, 179, 181, 219–220, 237, 253, 257, 259–260, 262, 272, 276, 285–287, 290, 292, 302, 317–318, 323, 326. *See also* mode, quality
Ps.-Plutarch (Aëtius), 56n

quality, 16, 22, 58, 105, 167, 319–320; empirical, 310; occult, 186. *See also* mode, property
Quine, W. V. O., 132n

Ramond, Charles, 213n, 223n
ratio, 95, 256. *See also* ground
ratiocination, 186, 198–199
rationalism, 220, 240, 315
Rawls, John, 206n
reality: as power, 15; constituents of, 11, 310; essence of, 295, 300; formal,

147n; hierarchical model of, 4, 72, 73, 75–76; metaphysical basis of, 9; objective, 147n, 170, 276, 284, 299, 303
reason: divine, 11–12, 32, 39, 46, 48; human, 7, 39n, 47, 186, 205, 212, 255, 274; perfect, 19
receptivity, 16, 25, 27, 34, 37–38, 43, 132, 278
reduction, 121, 123, 156–157, 161–162, 166, 187, 197, 200n, 201, 205, 210–211, 292, 326, 327n
Regius, Henricus, 142–143
Repo, Arto, 8, 247n
representation, 324
resistance, 15n, 20, 25, 27, 54, 137n, 139, 185, 191n, 194, 210, 230, 237–238, 252, 261, 314
Rice, Lee C., 214n, 226n
Rizk, Hadi, 213n
Roinila, Markku, 245n
Römer, Ole, 256n
Rousset, Bernard, 222–223
Rozemond, Marleen, 133n, 148
Rutherford, Donald, 244n, 249n, 250n
Rutten, Christian, 83n
Ryan, Alan, 208n

sadness, 41n, 161n, 226
Sallis, John, 29n
sameness, 26n, 33, 34
Santas, Gerasimos, 18n, 19n, 24n
scepticism, 262, 284
Schelling, Friedrich Wilhelm Joseph von, 301–302, 316n
Schmaltz, Tad, 173
Schmidt, Andreas, 4–5, 9
Schopenhauer, Arthur, 9, 10, 31n, 305–329
self-consciousness, 298, 300, 302–303
self-moving, 3, 12, 58n, 59, 227n
self-preservation, 187, 211, 267
self-subsisting, 12, 14
Sedley, David, 60
Sen, Amartya, 208n
Seneca, 50, 57–58, 61–63, 65–69
sensation, 20, 36, 39–40, 133–135, 141n, 143, 145–146, 150, 153, 161n, 186, 197–198, 263
Serene, Eileen, 107n
Sévérac, Pascal, 213n, 222n
Sextus Empiricus, 55n, 59n, 66n
Siger of Brabant, 125n
simplicity, 115, 144, 178, 216, 285–287, 295n
Simplicius, 62–63, 64n, 66n
Snow, Dale, 313, 316n
Snow, James, 313, 316n
Socrates, 22n, 34n
Sorell, Tom, 200n
soul: activity of, 149, 299n; dispositions of, 143, 148–150; embodied, 33, 37–39, 41, 48; human, 2, 35n, 36–39, 41–42, 45, 212; ideal, 19n; of the cosmos, 33, 36; passions of, 40, 42; parts of, 47; power of, 35, 40, 43, 47
sovereign, 7, 186–187, 208–212
space, 2, 11, 21, 25–27, 29–32, 35, 39n, 41, 64, 73, 87, 125n, 191n, 196n, 232n, 258n, 261, 265, 314–319, 322–324, 326. *See also chôra*, extension
species, 37, 99, 108, 124, 186, 273, 308–309, 312
Spindler, Fredrika, 213n
Spinoza, Benedict de, 5–6, 8–9, 23n, 31n, 41n, 82, 110n, 129, 137n, 173n, 187, 195n, 197, 211, 213–228, 242, 245, 254, 289–290, 314–315, 317, 320–321, 328n
spontaneity, 111, 150, 151n, 244n, 245, 249n, 250n, 271, 274–275, 278, 279n, 281
St. Jerome, 90, 93
state of nature, 203, 206–207, 208n
Stobaeus, Johannes, 50, 54n, 65n
Stoicism, 2, 9, 49–70, 83n
Stolarski, Grzegorz, 118n
striving, 2, 5–7, 9, 17, 21–24, 37, 40, 45n, 48n, 137, 185, 187, 195, 197, 210, 212, 204–206, 209, 212–213, 226, 306n, 307–310, 312–317, 326–329. *See also conatus*, endeavour, *nisus*
Suárez, Francisco, 216, 234
sublime, 267n, 268
subsistence, 54, 293, 301
substance: action of, 258n; category of, 264, 318n; complete, 233–234, 238; corporeal, 186, 236–238; extended, 317, 320; finite, 167, 260; incorporeal, 186; infinite, 167; powers of, 117, 262; unqualified, 3, 57, 59, 63
substratum, 318–319

teleology, 5, 214n, 315
telos, 11, 17, 18
tendency, 5, 135–138, 144, 147n, 163, 179, 185, 188, 197n, 222, 236, 260, 302n, 314. *See also* disposition
tension, 57–58, 60–63, 69

the thing in itself, 9, 306, 307n, 308, 310, 313, 316, 318–319
Tieck, Ludwig, 297, 298n
time, 54, 73–75, 104, 109–111, 117, 119n, 121, 125n, 127–128, 136–138, 140–141, 145, 147n, 151, 177, 179–180, 183, 192–193, 297n, 311, 314, 316–319, 322–324, 326
Todd, Robert B., 63n
Tornau, Christian, 81, 83n
transcendental deduction, 263

Ullman-Margalit, Edna, 206n
understanding, 179, 251, 263, 275, 283, 285, 288–301, 304
union: Cartesian, 133, 134n, 135, 142, 146, 148, 154, 161n; mind-body, 11, 133, 134n, 141n, 146n, 153, 155n, 159–160

Viljanen, Valtteri, 7–9, 31n, 110n, 185n, 219n
virtue, 24n, 40, 52, 63, 192, 280
vis, 213, 217–218, 222, 227n, 229, 251, 253–256. *See also dunamis*, force
Vlastos, Gregory, 22n, 30n, 47n
Volder, Burchard de, 231, 241–242
voluntarism, 97

water. *See* element
Watkins, J. W. N., 206n
Watson, Richard A., 184n
will: absolute, 221; free, 90, 105n, 152–153, 181; God's, 4, 90, 92, 96, 125, 144, 180–181; human, 6, 8, 100n, 133, 140n, 151–153, 155, 158, 159n, 180–181, 253, 278; objectivity of, 311, 321; power to, 98, 102; rightness of, 98–106, 111; to act, 194; to life, 315; to power, 202
Wille, 9, 273, 305, 306n, 315n
Willkür, 251, 273, 279
Wilson, Margaret, 143
Wilson, Mark, 317
Wittgenstein, Ludwig, 124n, 125n
world: actual, 111, 113, 223, 239; corporeal, 7, 15, 134–136, 139, 149, 156, 157, 185–186, 189, 199, 205, 211; created, 3, 59, 117, 125, 156, 236; inner, 291, 298–299; intelligible, 23, 30n, 77n; inverted, 296–297; material, 2, 12, 16, 28, 44, 144, 152–154, 157–159, 164–166, 168–169, 172, 173n, 177–182, 323; objective, 284, 302–303, 305; sensible, 8–9, 11, 19–23, 27, 35, 37n, 41–43, 73, 75, 253, 283, 290, 292–294, 296, 299–301; supersensible, 288, 291, 294, 296, 299; possible, 5, 113–114, 125n, 126n, 128, 247
world-body, 33, 35, 36
world-soul, 2, 33–35, 37–38, 42, 45–46

Young, Julian, 307n, 325n

Zac, Sylvain, 213n
Zarka, Yves Charles, 197n, 198n
Zeno, 52

Brill's Studies in Intellectual History

Series Editor: A.J. Vanderjagt

161. Stern-Gillet, S. & K. Corrigan (eds.). *Reading Ancient Texts. Volume I: Presocratics and Plato*. Essays in Honour of Denis O'Brien. 2007. ISBN 978 90 04 16509 0
162. Stern-Gillet, S. & K. Corrigan (eds.). *Reading Ancient Texts. Volume II: Aristotle and Neoplatonism*. Essays in Honour of Denis O'Brien. 2007. ISBN 978 90 04 16512 0
164. Stefaniak, R. '*Mysterium Magnum*'. Michelangelo's Tondo Doni. 2008. ISBN 978 90 04 16544 1 (Published as Vol. 1 in the subseries *Brill's Studies on Art, Art History, and Intellectual History*)
165. Catana, L. *The Historiographical Concept 'System of Philosophy'*. Its Origin, Nature, Influence and Legitimacy. 2008. ISBN 978 90 04 16648 6
166. Goodare, J. & A.A. MacDonald (eds.). *Sixteenth-Century Scotland*. Essays in Honour of Michael Lynch. 2008. ISBN 978 90 04 16825 1
167. Van Bunge, W. & H. Bots (eds.). *Pierre Bayle (1647-1706),* le philosophe de Rotterdam*: Philosophy, Religion and Reception*. Selected Papers of the Tercentenary Conference held at Rotterdam, 7-8 December 2006. 2008. ISBN 978 90 04 16536 6
168. Dixhoorn, A. van & S. Speakman Sutch. *The Reach of the Republic of Letters.* Literary and Learned Societies in Late Medieval and Early Modern Europe (2 Vols.). 2008. ISBN 978 90 04 16955 5
169. Cohen, S. *Animals as Disguised Symbols in Renaissance Art*. 2008. ISBN 978 90 04 17101 5 (Published as Vol. 2 in the subseries *Brill's Studies on Art, Art History, and Intellectual History)*
170. Lennon, T.M. *The Plain Truth.* Descartes, Huet, and Skepticism. 2008. ISBN 978 90 04 17115 2
171. Lehner, U.L. (ed.). Beda Mayr, *Vertheidigung der katholischen Religion*. Sammt einem Anhange von der Möglichkeit einer Vereinigung zwischen unserer, und der evangelisch-lutherischen Kirche (1789). 2009. ISBN 978 90 04 17318 7 (Published as Vol. 5 in the subseries *Brill's Texts and Sources in Intellectual History*)
172. Rothkamm, J. *Institutio Oratoria.* Bacon, Descartes, Hobbes, Spinoza. 2009. ISBN 978 90 04 17328 6
173. Richardson, C.M. *Reclaiming Rome.* Cardinals in the Fifteenth Century. 2009. ISBN 978 90 04 17183 1
174. Dyson, R.W. (ed.). *James of Viterbo*: De regimine Christiano. A Critical Edition and Translation. 2009. ISBN 978 90 04 17597 6 (Published as Vol. 6 in the subseries *Brill's Texts and Sources in Intellectual History*)
175. Lærke, M. (ed.). *The Use of Censorship in the Enlightenment*. 2009. ISBN 978 90 04 17558 7
176. Vall, R. van de & R. Zwijnenberg (eds.). *The Body Within*. Art, Medicine and Visualization. 2009. ISBN 978 90 04 17621 8 (Published as Vol. 3 in the subseries *Brill's Studies on Art, Art History, and Intellectual History*)
177. Sauter, M.J. *Visions of the Enlightenment*. The Edict on Religion of 1788 and the Politics of the Public Sphere in Eighteenth-Century Prussia. 2009. ISBN 978 90 04 17651 5
178. Verbaal, W., Y. Maes & J. Papy (eds.). *Latinitas Perennis*. Volume II: Appropriation by Latin Literature. 2009. ISBN 978 90 04 17683 6
179. Miert, D.K.W. van. *Humanism in an Age of Science*. The Amsterdam Athenaeum in the Golden Age, 1632-1704. 2009. ISBN 978 90 04 17685 0
180. Pietarinen J. & V. Viljanen (eds.). *The World as Active Power*. Studies in the History of European Reason. 2009. ISBN 978 90 04 17712 3.
181. Maia Neto, J.R., J.C. Laursen & G. Paganini (eds.). *Skepticism in the Modern Age*. Building on the Work of Richard Popkin. 2009. ISBN 978 90 04 17784 0
182. Cruz, L. & W. Frijhoff (eds.). *Myth in History, History in Myth*. 2009. ISBN 978 90 04 17834 2